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ORIGINAL ARTICLES.

TREATMENT OF CONGENITAL DISLOCATION OF THE HIP.*

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CONGENITAL dislocation of the hip is a serious disability. The articulation is insecure; the static conditions are deranged and the limb is shortened. Even if there were no increase of the discomfort and no deformity to be feared, the limp alone as it is seen in childhood is quite important enough to merit any treatment that offers reasonable hope of success.

The statement is often made that a dislocation is of comparatively slight consequence in females because of the concealment afforded by the skirts and because the part is not to be subjected to the strain of laborious occupation. But as this argument applies equally well to any deformity or disability of the lower extremities it hardly deserves special consideration.

Congenital dislocation of the hip can be absolutely cured both as to form and function. Such perfect cures can be expected only in cases treated at a seasonable time and in which excavation of the acetabulum has not been necessary.

The first essential of success is complete and permanent replacement of the displaced femur. Without such reposition functional cure is impossible.

Perfect and permanent reposition by simple manipulative treatment alone must fail in a large proportion of the cases in which it is employed. This treatment should be supplemented therefore by one or other of the cutting operations. If excavation of the acetabulum is required a very considerable limitation of motion is to be expected; but if the reposition is secure the ultimate result will be far better than that attained by anterior transposition of the head of the femur.

In cases treated at a proper age manipulative replacement is the treatment of choice. When its details are better understood and when its limitations are recognized it is likely in great degree to supplant the older operations.

It must have been the experience of every one who has attempted to discuss or to describe the Lorenz operation that it is difficult to make oneself intelligible by means of the terms ordinarily used to indicate attitudes of the limb. To illustrate: Let a model lie upon his back on a table with the legs extended and with the inner borders of the feet in apposition. Now if a student be asked to demonstrate the range of abduction he will move one limb away from its fellow in the same plane until the movement is checked by the normal muscular resistance. If asked to overextend the abducted limb he will carry it backward or behind the plane of the body. (Fig. 1). In this attitude, as may be demonstrated by means of a pelvis and femur, the neck of the femur lies in the plane of the side of the pelvis, the head of the bone pointing downward and slightly inward and forward. If now the thigh be rotated outward the head of the femur will turn upward and forward to distend the anterior in place of the inferior wall of the capsule. The student, if instructed to lessen the abduction, will carry the extended limb towards its fellow lying in the original position on the table; to flex the limb he must lift it upward or toward the ventral surface of the body. To him therefore Lorenz's description of the typical attitude in which to fix the limb after reduction of the dislocation as hyperabduction (to a right angle with the trunk), hyperextension (behind the plane of the body) and outward rotation,

Fig. 1. Abduction and hyperextension.

Fig. 2. Illustrating the range of normal abduction of the thighs, from the attitude of right angular flexion.

will seem clear and definite because he interprets it from the anatomical standpoint.

The model having resumed the extended position, the right limb is now flexed to a right angle with the trunk. If a second student be asked to demonstrate the range of abduction of the flexed thigh he will of course carry it directly outward to its limit. (Fig. 2). To hyperabduct he must force the thigh downward until it lies parallel to

* Read before the American Orthopedic Association at Philadelphia, June 6, 1902.

the table. To lessen the abduction he will lift the thigh ventral-wards; to lessen the flexion he will carry it downward toward its extended fellow.

Fig. 3. Illustrating the limitation of the range of abduction in bilateral dislocation. Compare with Fig. 2.

It may now be demonstrated by means of the pelvis and femur that in this attitude, which he will describe as flexion and hyperabduction, the

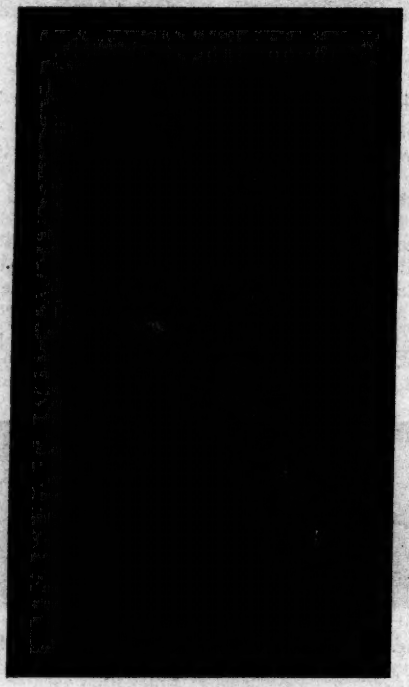

Fig. 4. Unilateral congenital dislocation showing the fixation bandage. A shoe with a cork sole about three inches in height should be worn on the operated side, while the attitude of exaggerated abduction is maintained.

neck of the femur lies in the anteroposterior plane of the pelvis, a position identical with that which the first student calls hyperabduction, extension and outward rotation. This confusion is accounted for in part by the difference in the manœuvers by which the position is attained, but principally by the unnatural or distorted attitude of the limb. One must understand the point of view of his audience therefore or else discard the terms. One may, for example, describe the typical attitudes of Lorenz as one in which the thigh, drawn up to a right angle with the the body, is forced outward until it lies in the plane of the trunk, or even somewhat behind it. And one may say of the after-treatment that the limb is gradually let down in the same plane, when the bandage is renewed. When the normal position is approached the ordinary terms may be employed; as, for example, one could describe the ordinary attitude in disease of the hip-joint as one of flexion, abduction and outward rotation, without fear of beng misunderstood.

The important points for consideration in an operation whose success is supposed to depend upon regenerative changes in and about the point, are, of course, the relation of the head of the femur to the acetabulum and how this relation is influenced by the successive changes in the position

Fig. 5. Bilateral congenital dislocation after reduction, the plaster bandage extended below the knees for more perfect fixation.

of the limb. In the treatment of the congenital as well as the acquired dislocation one aims to fix the parts in relation until there is no longer danger of redisplacement, the essential difference being that the undeveloped acetabulum and the lax capsule offer but slight support for the head of the femur. The distortion described as the typical position for fixation of the limb is essential in order to stretch the contracted anterior border of the capsule thoroughly and to place the femur in such a position that displacement is practically impossible. It must be borne in mind, however, that the Lorenz treatment is founded on the theory that the acetabulum is rudimentary, that its enlargement to a sufficient capacity is essential, and that this may be accomplished by direct pressure of the head of the femur in functional use. This is in fact the radical difference between the method of Lorenz and that of Paci which preceded it.

At present we have no accurate knowledge of the time required for the deepening of an insufficient acetabulum and for the reconstruction of the cotyloid ring, if it be reconstructed. Simple

manipulative treatment fails in a large proportion of the cases, and it is probable that many of the successful cases may be explained by the presence of a sufficient acetabulum rather than by subsequent transformation. If it be admitted that this transformation should follow functional use after reposition, then non-success must be thus accounted for:

1. Failure to force the head of the femur through the constriction of the capsule and into direct contact with the acetabulum. At one time it was believed that the constriction of the capsule between the acetabulum and the part supporting the head of the femur was in most instances an insurmountable obstacle, but it now seems probable, in the light of clinical experience and of more recent autopsies, that its importance has been exaggerated, at least in the early cases. If, however, a fold of capsule is interposed between the head of the femur and the acetabulum there is a peculiar insecurity at the time of operation, and a subluxation is present when the first fixation bandage is changed. This is apparent

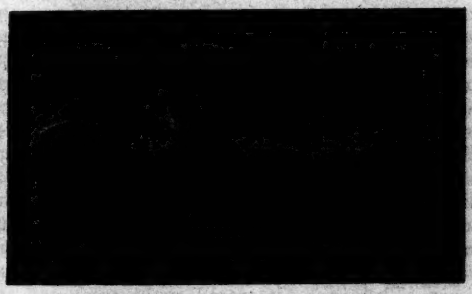

Fig. 6. Abduction and inward rotation. The attitude preliminary to osteotomy in cases in which there is an anterior twist of the upper extremity of the femur.

to those who are experienced in palpation, and it may be demonstrated by an X-ray photograph.

2. Such malformation that adaptation is impossible. The most important of this class is a twist of the upper extremity of the femur, or so-called anteversion of the neck. This anterior twist of the femur, to a degree sufficient to displace the head from the acetabulum when the limb is in normal position, is usually present in primary anterior and supracotyloid displacements, which are forms far more common than statistics indicate, and it not infrequently complicates the ordinary type as well. In certain instances it is possible to demonstrate this distortion by palpation or by an X-ray photograph before the operation, but in many cases its presence is not suspected until subluxation appears, when in the subsequent treatment the normal position of the limb is again approached.

Excluding these two causes of failure, which can be remedied only by arthrotomy and osteotomy, a third class remains in which it would appear that the head, at the time of operation, is forced into contact with the rudimentary acetabulum, and that the shaft of the femur is not twisted to a degree preventing adaptation. Non-success under such circumstances must be explained either by failure to hold the parts in apposition or by insufficiency of time allowed for adaptation or transformation.

In the erect posture the attitude in which the head of the femur is most completely in contact with the acetabulum is one of slight abduction, flexion and inward rotation. This attitude is therefore the one that should be most favorable for the development of the shallow acetabulum of congenital dislocation. In the typical attitude of Lorenz, which is described as hyperabduction, hyperextension and outward rotation, the head of the femur is forced forward so that it may be easily palpated in Scarpa's triangle. In this position there can be but bare contact of the upper part of the head with the acetabulum, and the pressure, therefore, is but slight. It is assumed that this extreme position is necessary in order to prevent displacement and in order thoroughly to stretch the anterior wall of the capsule; and in the ordinary routine of the Lorenz treatment this position is usually retained from four to six months, or half the time during which the fixation bandage is used. This would imply that the adaptation of the soft parts about the joint is of greater importance than actual deepening of the acetabulum by direct pressure. It seems to be the general impression that there is danger of redisplacement to the original position upon the dorsum of the ilium, whereas in the majority of cases the displacement is forward and upward, the first indication of failure being a slight lateral subluxation, so that the head of the femur can be felt at the outer side of the femoral artery. It is this very common experience that has suggested the advisability of fixing the thigh more effectively and in certain cases holding the head of the femur slightly internal to the femoral artery. This is what is meant by inward, as distinct from outward, rotation of the limb.

The outward rotation described by Lorenz is, from the operative standpoint, no rotation at all, for as is well known, the ordinary method of reducing the dislocation is first to overcome all resistance by direct traction and by massage of the tense adductors. The thigh is then flexed to a right angle with the trunk, and the pelvis being fixed by an assistant, one exerts upward traction on the thigh with one hand and with the thumb of the other pushes the trochanter upward. Thus the head of the femur is lifted over the posterior and inferior margin of the acetabulum. As the thigh is carried backward to, or behind the plane of the body, the head of the femur is forced forward, in some instances showing as a distinct elevation below Poupart's ligament. Slight inward rotation, sufficient to turn the center of the head slightly internal to the femoral artery, means from the anatomical standpoint simply incomplete outward rotation, rather than inward rotation as opposed to outward.

If this position of lessened outward rotation is

thought to be desirable, or if one wishes to fix the limb more securely in the typical attitude during the early stage of treatment, the plaster bandage must be carried below the knee, the leg being flexed upon the thigh to prevent rotation. The attitude is somewhat more awkward than when the leg is free, and walking is somewhat more difficult, but better fixation is assured, and I am convinced that this is of advantage, particularly in the treatment of very young children. When the second plaster bandage is applied at the end of two or three months, one has an opportunity to test the security of the joint, and if this permits, the limb may be lowered to a degree that will allow the patient to walk upon the foot without the aid of high shoe. At this time the ordinary Lorenz bandage is used (Fig. 4), and if necessary manipulation may be employed to overcome any limitation of complete extension at the knee. The aim should be to stretch the anterior border of the capsule thoroughly; to overcome all muscular shortening at the time of operation, and to fix the limb in the abducted and hyper extended position for a sufficient time to assure the adaptive changes in the capsule and surrounding muscles. In the after-treatment the limb should be retained in attitudes in which actual pressure of the two surfaces on one another is assured for a time that seems adequate for the development of the acetabulum. This time must vary with the age of the patient and with the anatomical condition of the parts. In some cases, particularly those in young children, the stability of the joint is such that a cure is practically assured when the first bandage is changed, the acetabulum being of sufficient size, no transformation is required. But in older subjects—provided that one is reasonably sure that the head of the femur has been forced through the capsule, and that anteversion will not prevent success—the period of adaptation should be very much increased. A year at least would not seem too long a time for this purpose.

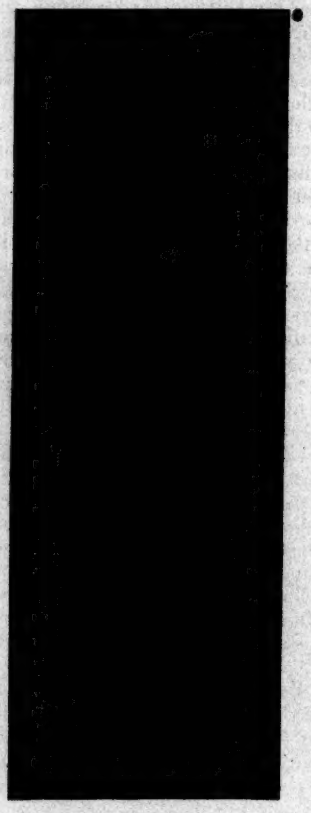

Fig. 7. The cure of congenital dislocation. The same patient is shown in Fig. 4.

Those who limit themselves to the bloodless treatment apparently believe that the final result of simple transposition of the head of the femur is equal to the best that may be attained by further operative intervention. This can hardly be admitted. It is well know that function can be greatly improved by fixation of the insecure articulation for a sufficient time to permit retracton of the capsule and muscles. After the support is removed there is a gradual return to the original condition, and there is no reason to believe that the final result of operative transposition will differ in any essential from that of the primary anterior displacement, in which the limp is of the characteristic type, although less marked than in the ordinary form. To assure success, therefore, in the sense that it has been defined, the simple manipulative treatment must be supplemented in many instances by one or more of the cutting operations. These are osteotomy, arthrotomy and excavation of the acetabulum.

The first procedure is indicated in those cases in which the upper extremity of the femur is so twisted that the neck points forward and slightly inward, instead of inward and slightly forward. As is well known, there may be a very considerable deviation from the normal direction of the neck of the femur without apparent disability if the head is restrained by the normal capsule and cotyloid cartilage. In the absence of such restraint, however, even a moderate degree of anteversion is sufficient to prevent success.

This distortion is almost always present in anterior dislocations, in older subjects at least, and in a certain number of cases of the common type. Not infrequently the diagnosis can be made before treatment. As a rule, however, the failure of treatment and the transposition of the head of the bone makes its presence evident. It this distortion is known to be present, the limb must be fixed after reposition in an attitude of inward rotation sufficient to compensate for the anteversion, the foot pointing, as a rule, directly inward. (Fig. 6). When the plaster dressing is changed, at the end of two months or more, this twist should be corrected by osteotomy.

The following is the method that I have em-

ployed: A long drill is inserted through the trochanter and into the neck of the femur while the limb is held in inward rotation. The femur is then divided by the subcutaneous method either just below the trochanter minor, or at the lower third of the shaft. The upper fragment being fixed by means of the drill, the shaft may be rotated outward to the desired degree. A spica plaster bandage is then applied to include the foot, the position of the neck being assured by the projecting drill, about which the bandages are applied. This may be removed when union is sufficiently advanced to prevent redisplacement.

In many instances the operation is secondary to arthrotomy, because one cannot be always certain that the distortion is the cause of non-success until the joint is opened. Therefore in cases in which failure is apparent after the simple manipulation the joint should be opened by the antero-lateral incision. By this means one can explore the acetabulum and test its capacity.

If a constriction of the capsule is present it may be overcome by incision and by stretching. The head is then replaced in the acetabulum, and the incisions in the capsule and in the superficial tissues are closed with sutures. One is then certain that there can be no obstacle to prevent functional transformation of the joint, if the limb is fixed for a sufficient time in a proper position. If anteversion of the neck is present, the limb is placed in inward rotation, osteotomy being deferred until the second dressing. These operations should not endanger the function of the joint, and as has been stated, they are essential supplements of conservative treatment.

It seems probable that excavation of the acetabulum, which was formerly thought to be essential to success, will be more and more restricted in its application. As the importance of curative treatment is more generally apprehended, and as the disability becomes sufficiently familiar to practitioners to be recognized (as it should be when the child begins to walk), the percentage of success by the Lorenz treatment will be greatly increased, especially when it is supplemented by the secondary operative procedures that have been mentioned.

The advantage of the original method of enlarging the acetabulum, provided, of course, that an anteversion of the neck is not present to a degree requiring osteotomy, is that it practically assures permanent reposition. Thus the long period of distortion required by simple manipulation may be avoided. Its great disadvantage is the persistent restriction of motion and the tendency towards distortion of the limb. The after-treatment usually advised is to remove the support within a few weeks after the operation, and to employ passive motion and exercises. This is, I think, an error, for the movement in the new joint, which is comparatively free and painless when the plaster bandage is first removed, almost immediately becomes restricted. Motion is then painful, and persistent flexion usually appears. For this reason I am inclined to think that the short Lorenz spica should be employed for many months, or until practical tests show that there is no longer a tendency towards deformity. Such support should be preferably removable, so that massage and voluntary motion may be employed during the later stages of treatment. But so long as local sensitiveness and pain on use or motion are present the joint should be protected. As a general rule it may be stated that the more perfect the replacement the greater the danger of restricted motion. In fact in those cases in which this restriction is absent a certain degree of anteversion of the neck is usually present, sufficient to prevent direct contact with the acetabulum. In such cases stability is assured in part by the acetabulum, and in part by the thickened capsule.

In cases, therefore, in which excavation has been required, or in which it has been performed, success is practically impossible unless the after-treatment or supervision is long continued. This may necessitate forcible manipulation under anesthesia to stretch contractions or to rupture adhesions. As a rule, in unilateral displacement the final results are satisfactory. A stable joint is assured —with restricted motion, it is true—but with the function greatly improved, only slight limp remaining which can be practically concealed by the older patients. One is therefore assured that the progressive shortening, which is constant in untreated cases, and increasing distortion and disability, which are often observed in adolescence, have been prevented.

It seems probable that in a certain proportion of cases of congenital dislocation of the hip the acetabulum is fairly normal at birth and continues to be adequate for several years. Only on this hypothesis can one account for the cases in which success is assured within a few months after reposition. In other instances the acetabulum is shallow and deformed, and the congenital inadequacy becomes more marked with age. The important question, as yet undecided, is whether such an acetabulum can be reformed by functional use. If it can be, then success simply requires attention to detail, more particularly the adapting of the treatment to the anatomical condition of the disabled part. At the present time more accurate statistics are essential.* Enthusiasts for the bloodless treatment are at pains to explain the distinction between anatomical and functional cures. Perfect function is, however, proof positive of anatomical cure, while a persistent limp is in a great majority of cases an indication of transposition. On the other hand, perfect reposition is by no means synonymous with perfect function. This is illustrated by the persistence of the limp whenever motion is restrained by adhesions or contractions.

Perfect functional success can be obtained only by the non-mutilating operations, that is to say, forcible reduction, supplemented if necessary by

* As a contribution to authenticated results, I may state, that at the May meeting of the Orthopedic Section of the New York Academy of Medicine, I presented ten patients cured by the Lorenz Method. In all the cases sufficient time had elapsed to assure the permanency of the perfect cure.

arthrotomy or osteotomy. The results in cases treated by this method may be distinguished as follows:

(1) Perfect cures; (2) transpositions; (3) failures.

The cases treated by the Hoffa-Lorenz operation may thus be classed: (1) Permanent replacement, with final results varying from practically perfect functional cure to anchylosis and deformity; (2) imperfect reposition, in cases of which there is often free motion, and the final result is usually somewhat better than after a simple transposition of the bloodless method: (3) failures, it being clear that after the open operation there is little excuse for complete failure. It may be stated that the statistics of the open operation, and to a far greater degree of the bloodless method, suffer because of the improper performance of the operations and the improper selection of the cases.

In conclusion I may state that from further experience I am inclined to these opinions: (1) That the more complete fixation that may be obtained by carrying the plaster bandage below the knee after reduction, combined in certain instances with lessened outward rotation of the limb, is an improvement on the ordinary technic of the Lorenz operation in the treatment of young children; (2) that a longer period of fixation in an attitude approximating the normal is necessary to assure the remolding of the acetabulum in old subjects; (3) that arthrotomy and osteotomy must be regarded as necessary supplements to conservative treatment; (4) that the the original Hoffa-Lorenz operation offers a prospect of a better ultimate result than transposition and that it must therefore be held in reserve as a final resort after failure of the less radical treatment.

THE ETIOLOGY OF SMALLPOX; WITH A SPECIAL REFERENCE TO ITS MICRO-BIOLOGY AND A DEMONSTRATION OF ITS MICROBE.*

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AN epidemic of smallpox is invariably the result of imported contagion. Some person, coming from an already infected spot, or the introduction of already infected materials—rags, clothing, paper, household articles, etc.—brings into a hitherto virgin field the specific germs of variolic epidemic. Without the introduction of such specific germs, derived from a previously infected source, no outbreak of smallpox is possible.

Once brought into a locality the germs of this disease may be prevented from developing by the rigid sanitary precautions of isolation or disinfection, or by the acquired immunity through universal and repeated vaccination, etc., of the whole population exposed.

The germ development and consequent spread of epidemic may be, and usually is, favored by the non-hygienic condition of a locality, and particularly by the remarkably tenacious sanitary ignorance of the communities threatened, often aided by the parsimonious and stupid administration of health matters by men ignorant or careless of the threatening danger and its manifold methods of contagion and virulence.

The transmission and propagation of variola depend upon direct and indirect contagion. The direct contact may be for an interval of time so short as to be almost instantaneous and frequently unnoticed or forgotten. But even the shortest possible moment of direct application of the germ-carriers (usually desquamated epithelium) is sufficient to cause an outbreak of variola in a receptive subject. While direct contact is more certain to distribute the disease, it is less frequent than indirect, that is to say, contact not with the individual affected, but with some material object, which, by contiguity to an infected source, subsequently plays the rôle of a disease-carrier to a new individual, thus communicating to the latter the germs of the disease, which it bears indefinitely.

A similar transmission of the infection may be accomplished by the intermediary rôle of a third person or domestic animal, etc., passing from one locality to another, and this origin of a contagion is often overlooked, for the reason that such an intermediary is often itself unaffected by the disease, which it may long continue to spread.

The practice of transmitting through the mail letters from infected sources (supposedly non-contagious) is responsible for various so-called sporadic epidemics of smallpox. To insist upon this fact, it may be well to declare positively that the supposedly efficient disinfection of letters by their multiple perforation and subsequent exposure to sulphurous fumes has been demonstrated by frequent experiment to be totally delusory.

Let us then remember that variola is an infectious disease caused by the introduction of a specific micro-organism into the blood. The well-known facts of the origin (contagion), development, spread and suppression of its epidemics are all in accord with the present demonstrable microbian origin of variola.

Like every other infection of the system by a pathogenic micro-organism the invaded human organism reacts against the invading germs. Our study of the etiology then involves in its problem the consideration of the degree and power of the element of contagion, its persistence, virulence, methods of diffusion and manner of entering the human organism, the powers of resistance possessed by the system, and how the invasion is either repulsed by, or conquers, the patient, according to the factors of receptivity, immunity, etc., called into play by him.

Smallpox is contagious at every stage of its existence. Hemorrhagic cases, before their eruption, during the prodroma, show the so-called

* Read at the Thirty-fifth Annual Meeting of the Medical Society of the State of West Virginia, held at Parkersburg, W. Va., May 21-24, 1902.

specific bodies in the blood, and have been proved to cause the variolic infection of others as early as the third and fourth day of the incubation (prodromic) period of the disease. From the first and second day of the eruption up to the stage of suppuration the degree of contagious power increases in a rapid geometrical ratio, which attains its maximum of infectibility at the moment of the formation of pus in the vesicles.

The degree of power of contagion possibly diminishes as the pustules encrust themselves and dry. But the commencement of desquamation, the fall and easy pulverization of the crusts, so increases the factors of diffusion of the germs that, whether the power of the contagion be diminished or not, its danger throughout the period of desquamation is vastly increased, and *persists* until the *entire reestablishment* of a new epithelium and a disinfecting bath, a period of time often extending over 40 days.

The desquamations, excreta (including the urine, in case of hematuria) and all organic fluids and residues reached by the blood of a variolic patient contain these special bodies. They are exceedingly resistant, and if really specific are proven by direct experiment to survive air-desiccation of the crusts for at least two years. They retain an unimpaired power of contagion after exposure to the terrific cold of evaporating liquid air, after subjugation to a hydraulic pressure of 4,000 pounds per square inch, and even after being heated for a limited time at 70° C.

Their resistance to chemical reagents is still a subject of investigation, but we can here mention as noticeable their very slight resistance to the action of extremely diluted solutions of the vegetable alkaloids. The usual chemical antiseptics destroy the microbes, but with varying coefficients of efficiency, still in course of determination.

Experiments with the vaccine bodies by the method of filtration have not given definite results, although it would seem that they will not pass through under normal conditions of pressure and of preparation.

The diffusibility of variola is vastly greater than that of any other eruptive fever. Its spread is nevertheless strictly limited to contact. Contrary to the prevailing opinion, every investigation of a possible case of obscure contagion, even of those cases attributed to the neighborhood of a pest-house, ultimately establishes, that the dissemination of the disease is due to a direct or indirect contagion, as previously defined, and can never be attributed to dissemination by the wind, etc.

Persons inhabiting the vicinity of a pest-house are no more exposed to the disease, than those protected by a greater distance, provided that there be no contact with any person or thing possibly contaminated by the inhabitants of the pest-house.

In considering the factors of receptivity to variola, it is to be remembered that no age of human life is exempt from the danger of smallpox. The receptivity of the fetus increases as the infected mother approaches the period of normal pregnancy. In two cases of abortion, one at the fifth, the other the sixth month of pregnancy, the mothers suffering with confluent smallpox in both cases, the amniotic fluid and the fetal tissues themselves revealed the presence of the specific microbes of variola. It is usual, however, that an *apparent* fetal infection is noted almost solely when the birth occurs during the ninth month of intra-uterine life.

But in this connection it should be remembered that in very young children an infection of variola most closely resembles that disease in animals, a pure septicemia, and any form of eruption is there exceptional. This in itself would account for the rarity of notice of smallpox in children too prematurely born.

While dwelling upon the difference between the clinical form of this disease in a subject near the natal period and the usual, eruptive form of the adult age, it may be well to remark the prolongation of the incubation period of variola that occurs in the fetus. A child at birth may show an attack of smallpox of a much more recent date than that manifested by its mother. It is not an uncommon occurrence for the new-born child to commence eruption fully one month later than the disease was known to have commenced in its maternal parent.

Every individual exposed to a variolic contagion is not necessarily attacked by the disease. There exists an immunity of two kinds, the natural and the acquired.

A natural immunity to variola is less frequent than is found to exist for other eruptive fevers. The proportion of immunes is roughly estimated at one in 1,000. An exact statistical estimate is extremely difficult to obtain, for the reason that a natural immune may successively pass through a series of severe epidemics of variola and then be suddenly taken with the disease, often in a severe and fatal form.

The so-called natural immunity may possibly be really acquired from an intra-uterine or perinatal variolization which was never observed or has been forgotten.

It is however a well established fact that some families are hereditarily refractory to smallpox.

The immunity claimed for particular races or sects of the human family, such as Hindus, Australians, etc., has not been confirmed by facts derived from a better knowledge of those races. The pretense that racial immunity may be acquired by a long series of generations being exposed to variolic disease and a generation, by heredity, refractory to smallpox being so established is not justified. For it is a fact that the Chinese, the race for the longest known period of time exposed to the ravages of this malady, are still obliged to resort to preventive inoculation of the disease to counteract their great susceptibility to its invasion.

That a continued habitation of a very infectious locality might endow the individual with a more

or less permanent immunity is admissible. But even in this case there is a probability that it was in reality an immunity acquired by an abortive attack of the disease.

It is maintained—and the fact merits the widest possible control—that throughout the course of a typhoid fever the patient remains absolutely refractory to the contagion of variola.

Natural immunity is so rare and so far from absolute that its rôle as a preventive to the invasion of smallpox is a totally negligible factor in epidemiology, but this is far from being true in the case of an acquired immunity.

Immunity from variola may be acquired, first from a previous attack. This is generally complete, but must never be considered as absolutely so, as cases of second and even third attacks are well authenticated, these subsequent invasions, however, being very rare and very mild.

An immunity obtained by a first light case of smallpox is by no means as good a guaranty of permanent protection against a subsequent attack as would be the result of recovery from a very severe variola.

The protection to be derived from an anterior experience is more positive and greater than any other acquired immunity. But a close second to it in duration of protective power and lasting effect is the immunity to be derived by the so-called protective inoculation of variola. Such a result is fully to be expected, for in fact, this is undergoing the disease itself. This method of safeguarding the people from epidemic is the constant practice of the Chinese, the Arabians of the desert, and various ignorant Indian and Negro tribes at the present day.

This same inoculation of smallpox is, I believe, the only preventive treatment provided for its people by the State of West Virginia.

The immunity acquired by the so-called and well-known method of vaccination is, when properly executed, very efficacious, but is by no means reliable for the same length of time.

The duration of the efficacy of vaccination depends upon various factors—the virulence of the vaccine lymph, the number of points inoculated, and the time elapsed since a previous vaccination. Vaccination, under the most favorable conditions, rarely determines an immunity of more than eight years duration. Usually a vaccination immunity will be found a negative quantity from three to five years after its performance. I have personally observed a negro in this State who was very satisfactorily vaccinated two years before contracting a light case of variola.

Striking statements have been made, requiring control, however, that some individuals are refractory to vaccination, but will take variola. In view of the tendency of actual investigations to identify the specific organism of vaccination as identical with the microbe of variola, although in an attenuated form, such a condition of refraction to one and receptivity to the other infection would be explained with great difficulty. This fact of possible identity of the germ in both cases tends very strongly to make those statements at least questionable.

In the usual course of infection, the suspected microbe of variola penetrates the human system by the respiratory organs, then if successful in traversing the bronchial epithelium, it enters the blood, whereby it is diffused throughout the organism, in which it lives and multiplies, producing the well-known symptoms of variola, a veritable general toxemia of which the eruption is either the mere epithelial reaction or excretion, as further investigations may determine.

The juices of the digestive tract destroy the parasites of this disease, which are incapable of entering the intact cutaneous epithelium, but easily penetrate any denudation of that surface. The transmission of the disease from mother to child is clinically well known, and by positive identification of the accusedly specific germs *in situ* their transmission through the placenta is an established fact of observation. Incidentally it may be noted that the variolization of the mother either results in the abortion of a variolized fetus or in the birth of a child without symptom of disease, but producing a characteristic eruption a few days later. In a number of cases, however, it has been noted in clinic that the child does not erupt, and the conclusion has been advanced that it was constantly immunized by the blood of its variolic mother reaching the fetus as precursor to the infecting virus, which was thus rendered inefficacious. Such an explanation is far too speculative for general acceptance. With the present possibilities of search for and identification of the specific microbe, the claim is being brought forward that the child without eruption is in reality infected by the specific disease, but in that form of pure septicemia already mentioned as common to the very young child and the prevalent form of manifestation of the disease in animals.

Another case of variola being transmitted through the placenta is found where the apparently unaffected mother, after an exposure to this infection, gives birth to an undoubtedly variolized child. The explanation of contamination of the maternal organism which penetrates to the fetus, but is unable to affect the partially immune adult tissues of the mother, offers a most attractive problem for the positive identification of the pathogenic element in the maternal blood. This work, however, has not been done on account of the extreme rarity of the prescribed conditions.

According to the number and virulence of the parasites, when their penetration of the human system is effected, the reactive tissue phenomena are more or less pronounced.

In cases of pronounced virulence of infection deep cellular lesions are provoked. The blood is profoundly altered. Marked and characteristic *mononucleosis* is invariably to be found. The specific germs are not in such profusion as would be noted for a similar infection by bacteria, but a careful examination of several fields of the microscope will generally be successful in revealing

the germ sought for, particularly in the hemorrhagic cases.

Erythema and purpura hemorrhagica of the skin and mucosæ and the principal organs are frequent precursors of a fatal end. In such cases the individual succumbs without any tendency to a suppuration. He is a victim of a real hemorrhagic septicemia. If the virulence of the infection is not too great, the expulsion of the invading microbe may take place. Such evacuation of the parasite is effected by the reaction of the human organism, eliminating the objectionable invaders through the skin and mucosa by a process of successive papulization, vesiculation, eruption of the epithelium, its denudation and consequent desquamation, taking with it the pathogenic microbes, thus completely thrown out.

The formation of the papules marks the points selected for the elimination of the parasites, in the struggle against which the predominence of cellular elements filled with pus constitutes the so-called suppurative stage of the eruption.

This pus of the eruptive cells is not dependent upon adventitious pyogenic germs, but is the work of the specific agent itself, whose continued presence in the blood thus provokes a real pyemia, the termination of which is the resolutive cutaneous expulsion of the determining microbe.

Between the hemorrhagic, almost exclusively toxemic type of variola, and the more or less severe types of eruptive predominance there are numerous transition forms. Sometimes a septicemic variety is influenced by a last reactionary effort of the resisting organism, and as a result manifests an eruption of a few irregularly distributed pustules. Reciprocally, a suppurative type of variola can be modified in its progress by the development of secondary hemorrhagic symptoms. And finally a mixed form of infection is to be marked in which, from the first, manifestations of the disease appear, both the intercutaneous and mucous hemorrhages and the pustules synchronously.

Recalling that the intensity of the symptoms of a variolic invasion is dependent upon the degree of virulence of the specific germs and the factors of resistance of the individual threatened, it will be easy to understand that as soon as the form of the disease, whether hemorrhagic or eruptive, is determined by the ultimate adjustment of the invading and repelling forces thus called into play, we have still to consider the original virulence of the infection as a determinant of the degree of eruption. But in the pustulous forms the eruption is as much more intense as the specific microbes entering the organism were originally more abundant. Estimate very carefully the severity and intensity of the eruption in any given case, and by diminishing degrees, scarcely to be perceived, those cases are reached in which the pustules are exceedingly rare, or even fail entirely. Cases of this kind are the so-called abortive, which turn short at the preeruptive stage of the infection and produce no pustules.

The abortive types of a variolic infection are scarcely distinguishable and usually pass unnoticed except in times of epidemic (a possible origin of the so-called natural immunity).

In two epidemics of smallpox in West Virginia I have personally observed three cases of this abortive type. Each of them was refused by the local official quarantine officer for the reason that there was no eruption. The symptoms of these cases are typical for the abortive type of variola and were in general as follows: An individual, having been exposed to a smallpox contagion, is taken from 10 to 15 days later with chills, fever, more or less intense rachialgia, and possibly some digestive disturbances (nausea, etc.). Three or four days later the accidents subside, without the production of the slightest eruption. Examination of the blood of individuals thus affected will show the special *mononucleosis* that is characteristic of smallpox, and *"invariably suffices to fix a doubtful diagnosis."*

Since then it is known that these are abortive types of variola, that the disease invariably denotes the presence of the specific pathogenic parasites in the blood of individuals so affected, there can be no possible excuse for a failure to remove from a community of people such a constant menace of infection. Permit me to add that in the cases of my personal observation, above referred to, there was no mark or history of a previous vaccination. After their recovery from this abortive type of smallpox each of the three individuals was repeatedly vaccinated, with continuous negative results.

In closing the subject of resistance and virulence, the resolution of the varying factors of which determines the form of the disease in each individual affected, there remains the noteworthy fact that strong, robust adults are more frequently attacked by the variola and are more apt to present a development in severe type.

After a contamination by the specific germ it could frequently happen that the microbe remain inert upon the clothing, skin-surface, or in close proximity; and that the real contagion, the entrance of the parasite into the organism, be accomplished only after some days. This possibility becomes very important when the duration of the period of incubation is to be considered. A consensus of clinical experience reports that the period of incubation is from eight to nine days when the virus has been inoculated, from 10 to 14 days when the disease has been contracted by contagion.

To establish accurately the limits of this incubation of the malady, accurate experiments are reported by a physician and two medical students. A careful record and supervision of these three cases gives, for the physician and one of the students, exactly nine days and eight hours, for the other student nine days and four hours from the actual minute of exposure to the first recognizable symptom of variola.

The Study of the Variolic Microbe.—In the first enthusiasm of the discoveries of germs as determinative causes of disease the bac-

terial origin of all infection was very generally claimed and quite widely accepted.

The numerous announcements of the identification of a specific coccus, bacillus, or other bacterium as the cause of variola have not yet reached the end of the list, nor have their rival claims been withdrawn. But their very numbers have succeeded in creating a widespread scepticism as to their scientific value, and a strong insistence that no further immature investigations be offered.

Realizing the advantage of working in the midst of prevailing scepticism, it is a particular pleasure to be able to bring forward investigations in a field other than that of bacteria.

Remember that this variola is preeminently distinguished for its long-known specificity of "virus." With the lacking bacterial identification of a specific organism, its culture in vitro and reinoculation with production of the typical disease, we have had for centuries in smallpox syndroma the picture of a bacterial infection of the human organism; but 30 years of bacteriological investigations, some of them by the best microbiologists in the world, have totally failed to demonstrate any form of bacteria entitled to the slightest claims of specificity in accordance with the prescribed rules of the scientific method of research.

Without denying the possibility and frequency of a secondary bacterial infection of the variolic pus, it may be said that examination of such pus or other liquid or tissue of a variolic subject has repeatedly demonstrated that the material contains no bacteria recognizable by any known process of stain or culture. Nevertheless, the inoculation of such material will inevitably produce the specific infection in any properly receptive medium. Such positive inoculations of material absolutely deprived of bacteria have been made in a case of hemorrhagic variola blood being drawn from the vein at the elbow one hour before death; again, with various tissue substance from certain visceral lesions, proven to be absolutely free from any bacteria revealable by any process of stain or culture; also by an inoculation of the seropurulent liquid from a suffusion of the vaginal tunic during the course of a variolic orchitis.

By inoculation with such pus and the blood of hemorrhagic cases of variola there may be continuation in series, inducing a subsequent immunity to smallpox in some animals invariably provoking a subacute septicemia of slow fatality.

Original blood from a case of hemorrhagic variola is now being carried in a continuous series of animal inoculation and reinoculation at the Carnegie Laboratory. It invariably provokes a fatal disease in the animals chosen for experiment, with persistence of a characteristic which, when sufficient data are gathered, may be proved to be the specific agent of variola.

Every effort to establish the bacterial origin of smallpox having thus far failed, it is to be expected that its determinant etiological factor should have been sought elsewhere, and so comes the suggestion of a protozoic origin for the disease. This originated with Renaut in 1881, and was most prominently taken up by Van der Loëff and Pfeiffer. It was first directly experimented upon by Guarnieri, but was far from established in any presentation of scientific data until the recent works of Bosc and Roger in France.

By many investigators the so-called variolic bodies are supposed to represent some form of the specific agent of variolic contagion, and such investigators would seem to be in the right, although they have failed to bring forward convincing proof. This has been the aim of the work, at the Carnegie Laboratory which seeks by original methods of culture, growth and examination of every stage during life to establish the identity of this organism, to determine, whether or not it belongs to the Protozoa to study its life-history and consequently its serial morphological characteristics, and last, but most important of all to ascertain its proper metabolic relations.

Students of Protozoa, possibly because they are not sufficiently cognizant of the laws of biology, seem to forget that if we are to distinguish bacteria as vegetable, in contradistinction to Protozoa as animal, we ought first of all to expect to find important differences in their capacities for food supply and imbibition. In other words, we ought not to expect that a medium most excellent for the nutrition and growth of bacteria would therefore be adaptable to the Protozoa. To take up the study of such forms of life and limit the efforts of growth to the media devised for bacteria would possibly seem foolish from this point of view.

A knowledge which we already possess of Protozoa and their parasitic forms shows that they are found most abundantly in parasitism, as the form of animal selected for host is lower in the animal scale. This would suggest transferring any study of a protozoon parasite to the lowest form of animal life upon which the vital phenomena to be observed are capable of being produced, that is to say, by grafting the parasite in question upon the simplest form of animal capable of developing the life-cycles of the special protozoon destined for study. By this method of choosing a living culture medium were produced the proliferations of the supposed micro-organism here presented. Taken from this medium, selected for their development, and in which the rapidly increasing numbers of the microscopic forms may be seen in the blood of our selected animal we produce any degree of inoculable virulence of disease, but apparently always dependent upon the relative number and source of the micro-organisms inoculated.

In addition to choosing the simplest forms of animal life for media most favorable to the growth of parasitic protozoon, it might be suggested that the food intended for such organisms be simplified, that is, rendered more assimilable than the usual albumin forms, readily handled

by bacteria. This simplification of the requisite food is also being done in the laboratory, and is apparently destined to give good results, but the multiplicity of the possible changes in food-assimilation factors is so great that the progress of the work in this field is not yet sufficiently precise to authorize its presentation.

A MODIFIED METHOD OF AUSCULTATORY PERCUSSION.

BY ALBERT ABRAMS, A.M., M.D.,
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VARIOUS maneuvers have been advocated for topographical percussion of solid and air-containing organs. Perhaps the most accurate and certain method is that of auscultatory percussion. Its successful employment, however, postulates a definite amount of skill which can only be attained after much practice. Executed in the conventional manner, the technic is sufficiently as follows: The pectoral extremity of the stethoscope is fixed by the patient or assistant over the organ to be delimited; then percussion is practised by the clinician, beginning beyond the presumable area of the organ, and continued in the direction of the stethoscope. Alteration in the percussion-sound indicates that the border of the organ in question is reached, and this particular point is marked with a dermograph. Percussion is executed radially from different points until the entire organ is outlined.

The ordinary method of auscultatory percussion is associated with many drawbacks which even the skilled diagnostician is unable to eliminate. He requires assistance to fix the stethoscope in position. It is difficult to differentiate between the vibrations of the thorax and the sounds obtained from the underlying organ. The nuances of sound can not be appreciated as percussion approaches the stethoscope, owing to the magnification of the sounds. The primary objection, it was hoped, could be diposed of by the use of phonendoscope, stroking the skin instead of percussion being employed. The consensus of opinion, however, is against the phonendoscope as an instrument of accuracy.

The modified method of auscultatory percussion which I here advocate is suggested after several years' experience in its employment. Its accuracy I have frequently controlled by skiascopy. It embodies the principle of transsonance. It is available in topographical percussion and for determining the density of the lungs after a method which will be presently described. Percussion transsonance is obtained when the thorax is percussed either directly or indirectly at a time contemporaneous with auscultation at some remote point. In my modified method of auscultatory percussion, the clavicles, sternum, ribs or vertebræ are percussed directly, *i.e.*, without the interposition of the finger as a pleximeter. The percussion-blow is either light or strong according to whether the superficial or deep dulness is to be elicited. If, for example, the area of cardiac dulness is to be obtained, the clavicle or manubrium sterni is percussed directly, and the stethoscope is gradually carried towards the organ in all directions from the lung. The area of the heart is at once indicated by a dull tone supplanting a resonant one. A similar procedure is carried out in eliciting the upper liver-border and the splenic area of dulness. Lung-consolidation is also easy of elicitation by this method. If, for example, the transsonance of the apices is to be determined anteriorly, the stethoscope remains fixed first over one and then over the other apex, while immediate percussion is executed on a prominent vertebra. If the apices are to be auscultated posteriorly, the percussion-blow is limited to the manubrium sterni. It is possible by this method to outline the right auricle and the left ventricle on the posterior chest-surface provided the patient is in the erect posture with body inclined slightly backward. The pectoral chest-piece of the stethoscope should possess a small caliber for the better object of demarcating the outline of organs. The fact must be emphasized that during the time this method of auscultatory percussion is executed the percussion-blow on some prominent bony structure must be continuous and uniform while the stethoscope is carried toward the organ to be outlined. The percussion-hammer recently designed by Dr. Heinrich Stern of New York will prove of great value in obtaining uniform results.

The drawbacks pertaining to my method are present only in corpulent individuals in whom the well-padded bony structures will not permit the percussion-blow to be conveyed to any distance. Another drawback which is also present in the conventional auscultatory percussion is the inability to interpret the character of the percussion-sounds. This is, of course, a matter of practice. I cannot too highly extol this method, not only in topographical percussion but also in determining the resonating qualities of the pulmonary tissue. I have elicited incipient lung-consolidation when the conventional methods have failed. I have also used this method for outlining the lower border of the stomach. The method of procedure is briefly as follows: With the finger the lower ribs over the semilunar-shaped space of Traube are percussed, the stethoscope being fixed primarily in the hypochondrium in order to learn the character of the tympanitic tone. Then while percussion is continued the end of the stethoscope is gradually carried downward until the disappearance of the tone indicates that we have reached the lower border of the stomach. Dr. H. Block, of this city, a specialist on diseases of the stomach, has, at my suggestion, examined a number of cases, controlling his results by insufflation of the stomach, and he concludes that the method is undoubtedly accurate.

I have found my method of no value in determining the lower border of the liver, and for the attainment of this object I would recommend a method described elsewhere.* The method in

* The MEDICAL NEWS, Feb. 8, 1902.

question is: The patient is told to incline his body backward as far as possible, and to relieve the tedium of the posture the body is supported by means of the hands resting on the hips. If percussion, which must be light, is now attempted, the lower hepatic border is easily elicited. In the posture suggested we approximate the surface of the liver to the abdominal parietes, and afford a like medium for the transmission of the percussion-sound; namely, the relatively dense abdominal musculature. This method is based on a simple law of physics, that sound-waves are best conducted by the medium in which they are produced. The percussion-sound in the conventional method of eliciting the lower liver-border must pass through the abdominal muscles, and then through the air-containing viscera, before it reaches the liver.

SYMPTOMS, DIAGNOSIS AND COMPLICATIONS OF GONORRHEA.*

BY ABRAHAM L. WOLBARST, M.D.,
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WHATEVER apology may be deemed necessary for the addition of another paper to the extensive literature on the subject of gonorrhea, may be found in the widespread opinion among physicians that gonorrhea need not be taken seriously, and that anything that will stop the pain and the discharge is good enough. On the other hand, if the subject of gonorrhea is serious enough to be worth all that has been written upon it, the diagnosis and symptomatology are worthy of serious attention.

The ease with which a correct diagnosis can be made, may be said to be in inverse proportion to the duration of the disease. The longer the disease has lasted, the more difficult it is, for obvious reasons, to make a correct diagnosis of the pathological conditions.

In spite of the ease with which the usual attack of acute urethritis can be diagnosticated, it is not rare for physicians to diagnose other conditions which bear more or less resemblance to it. In a typical case of acute gonorrhea there are three cardinal symptoms which are invariably present, and on which a fairly positive diagnosis may be made; namely, a profuse discharge, an angry-looking meatus, and cloudy urine. A tentative diagnosis, thus made, finding the Neisser gonococci in the discharge makes acute gonorrhea certain, though their absence does not necessarily indicate that the inflammation is not gonorrheal.

Subjectively, the elements of pain and frequency of micturition are exceedingly variable. Some patients suffer considerable pain, while others feel only a slight sensation of heat or burning as the urinary stream passes through the inflamed canal. In many patients there is no pain whatever, even though the entire urinary canal be involved. When the inflammation is limited to the anterior urethra there is usually little, if any, increase in the frequency of micturition; it is only when the posterior urethra becomes attacked that the frequency of micturition assumes importance as an element in the diagnosis, for this increased desire to empty the bladder is to be taken as an evidence of increased irritability in the bladder region. Occasionally, however, cases are encountered in which there is a more or less continuous desire to pass water, day and night, without any involvement of the deep urethra. This condition is caused by reflex disturbances from the anterior urethra, acting upon the bladder sphincter.

The non-specific forms of urethritis, that is to say, those which are not produced by the action of the Neisser gonococcus, are not usually very difficult to diagnose. In this classification are included those in which the urethritis is brought about by contact with menstrual or leucorrheal discharges, and irritant conditions of the urine. Instrumentation and irritant injections may also be added as exciting causes. Whether these exciting causes can produce an inflammation in an otherwise healthy urethra is still a mooted question; but there is no doubt that when the urethra is already the seat of a chronic inflammatory process, even if there be no gonococci present, any of these factors is capable of producing a catarrhal inflammation which it is important to differentiate from the gonorrheal variety. In this form of urethritis the period of incubation is usually of shorter duration than in the specific variety, and the disease is characterized throughout its entire course by less virulent symptoms than those of gonorrhea. There is a slight burning sensation on micturition, the meatus is slightly reddened and sometimes swollen, and a whitish secretion, in which the gonococci are never found, can be squeezed from the urethra. This is in sharp contrast to the virulent-looking secretion which is seen in the specific variety, though in some cases the discharge may be quite profuse. The course of the disease is not only milder in every way, but the duration is considerably less than that in true gonorrhea and it is quite certain that many of the reports of wonderfully quick cures of so-called gonorrhea were actually, though unknowingly, dealing with these simple or non-specific varieties. There are exceptional cases, however, in which the symptoms and course of the disease so closely resemble the gonorrheal variety that the diagnosis can only be made after fruitless and repeated search for the gonococci. These cases may run an exceedingly obstinate course, in spite of all and any treatment, or perhaps because of it, and occasionally a condition of sexual neurasthenia may follow.

The presence of a chancre or chancroid in the urethra may produce symptoms which strongly resemble those of simple urethritis. Chancroid of the urethra is practically confined to the lips of the meatus, though it may extend into the fossa navicularis. A recent instance in private practice which presents itself to mind, illustrating the

* Read at a meeting of the Eastern Medical Society, New York, May 9, 1902, in a symposium on "Gonorrhea."

extent to which an error in diagnosis may be carried, is that of a physician who for three weeks treated a patient, presumably suffering from gonorrhea, with daily injections with a urethral syringe, without any improvement. The patient then consulted another physician, who at once discovered a typical chancroid of the meatus. Once seen, it could not be mistaken for anything else. There was the usual amount of discharge of a watery character; the urine voided into a glass was somewhat cloudy and contained shreds, and there was considerable pain at the meatus on micturition. But there were no gonococci in the discharge at any time, and there was an indisputable chancroidal ulcer surrounding the lips of the meatus, both of which important facts the first physician failed to notice. He also failed to observe that the injecting syringe caused the patient agonizing pain every time it was brought into contact with the meatus, this being a most unusual occurrence in the various forms of urethritis, except in very severe inflammations.

The primary lesion of syphilis may extend as far back into the urethra as three or four inches. When it is situated at the meatus the typical induration and general appearance make the diagnosis a matter of no great difficulty. When the chancre is deep-seated the induration can be felt and the diagnosis thus made. The absence of pain and tenderness on pressure, and the absence of gonococci from the discharge, differentiates this condition from peri-urethral abscess.

Where phimosis exists, and retraction is impossible, there may be a little difficulty in making a correct diagnosis of the existing trouble. The preputial cavity must be thoroughly washed out with a small glass syringe, and the discharge, which can be pressed out of the urethra, is then examined microscopically. The urine can be collected in glasses for the usual examination. A chancre hidden by the prepuce may easily be felt by the hand; and as for chancroid, the presence of painful bubo, tending in most cases toward suppuration, may be relied upon as a guide in diagnosis.

There is one other condition which may simulate simple urethritis. This has been described as syphilitic urethritis, and is found in the secondary stage of syphilis. With the urethroscope, the mucous patches or the roseola by which this condition is caused may sometimes be seen. Moreover, secondary lesions in other parts of the body aid in making the diagnosis.

These various lesions are to be thought of whenever a patient presents himself with symptoms that are *not* typical of *acute* gonorrhea. In the typical cases the symptoms are clear and unmistakable, and the microscope will usually correct any error that may be made.

The first step in making a diagnosis in a case that looks typical is to take a specimen of the discharge, by means of a sterilized platinum loop, for microscopical examination. The common practice of pressing a glass slide against the meatus cannot be recommended on any ground whatever. All that might be said in its favor is that there is a questionable saving of time, an item of importance in a crowded dispensary practice. In private practice, however, it deserves the severest condemnation. The second stage in the examination is to determine whether the inflammation is confined to the anterior urethra or has extended to the posterior urethra as well. The anterior urethra is thoroughly washed out with a warm, diluted solution of methylene-blue or potassium permanganate, until the drippings come away perfectly clear. The patient then passes his urine into a clean glass. If the urine thus passed be clear the inflammation is limited to the anterior urethra alone; if it be cloudy, or contain shreds, the posterior urethra is also involved. This is known as the Jadassohn-Goldenberg test, and when properly performed is absolutely reliable. In doing this test the patient must be cautioned not to pass any of his urine while the anterior urethra is being washed out, and furthermore, the test is of value only when the urine has been retained in the bladder for at least four or five hours. The longer the urine is retained the more reliable and satisfactory this test will be found.

By this method the gross fallacies of the Thompson two-glass test will be avoided. In this connection, too, mention must be made of the importance of determining whether cloudiness of the urine is due to the presence of pus or of phosphates, the latter being often carelessly mistaken for the former.

These preliminary steps having been taken, the physician is prepared to treat the case intelligently, for an intelligent and useful therapy can only be instituted when the exact nature and extent of the inflammation is known.

Extension of the inflammation to the posterior urethra is by all means the most frequent complication of acute gonorrhea, and so frequently does this occur that some writers have gone to the extreme of declaring that posterior urethritis is no complication at all, but that it occurs to a greater or less degree in cases of gonorrhea, with few if any exceptions. This position seems to be hardly tenable, for cases are often met with in an extensive practice in which there are not the slightest symptoms, subjective or objective, which point to posterior involvement. More conservative authorities differ widely as to the frequency with which the posterior urethra is attacked, the figures ranging from 80 per cent. down to 20 per cent. in selected cases. The higher figures seem unnecessarily high, in view of the excellent results which may be attained with the modern methods of treatment when properly carried out, all of which tend to the prevention of posterior involvement, if the cases are seen early enough and treatment at once begun. It is also quite likely that some of these figures may have been based on cases in which the diagnosis of posterior urethritis was made by the Thompson two-glass test. Cloudy urine in the second glass may easily lead to this error, yet the pus in the second glass may come from the anterior urethra.

The symptoms of acute posterior urethritis may be so mild as to give the patient little or no pain or discomfort, or they may be severe enough to confine him to his bed. The extension from the anterior urethra usually occurs in about the third week of the attack, though it has often been seen in severe cases as early as the second or third day. The diagnostic symptoms of posterior involvement are increased desire to empty the bladder, a dull aching pain at the meatus urinaris, or in the perineum during or after this act, and a diminution or cessation of the discharge from the meatus. The Thompson test shows pus in both glasses, and after irrigation of the anterior urethra the urine passed also contains pus. Hematuria is not seldom seen with this complication, the blood usually appearing after the last drop of urine has been passed. It is an important and noteworthy fact that the extension of the inflammation is not attended with constitutional disturbances of any kind. An index to the severity of the inflammation may be had by noting the frequency with which the patient is called upon to empty his bladder. In severe cases there may be a constant desire to meet this demand, both by day and night, but a few drops of urine being passed each time, accompanied with more or less pain, and followed by several drops of blood. Painful erections, recurring at frequent intervals, make the patient fully regret his moment of joy and infection, and if the anterior urethra be still the seat of an acute inflammation, chordee will appear, to add to his days of despair. In passing, it may be well to note that in posterior involvement of the urethra the frequency of micturition is increased both day and night, while in neurasthenia there is no nocturnal increase in the desire to empty the bladder except in rare instances.

The cessation of the discharge is not to be considered as evidence that there is less pus in the urethra than there was before the extension into the posterior occurred. It means that the pus, instead of flowing forward towards the meatus, is flowing backward towards and into the bladder. This is often made manifest by the urine in the second glass presenting more pus than is seen in the first glass.

The complications following the extension of the inflammation from the posterior urethra constitute a good-sized list. Whether the healthy bladder itself may be the seat of gonorrheal inflammation, is not definitely settled, though the vesical neck is nearly always involved, owing to its close proximity to the posterior urethra. What is often spoken of as acute gonorrheal cystitis is in reality posterior urethritis with involvement of the vesical neck. It is quite possible, however, for a bladder previously diseased by the inflammatory products of other germs, to become the seat of gonorrheal infection. This is seen not infrequently in men suffering from hypertrophied prostate, in whom the catheter and instruments have been the carrying agent of a gonorrheal infection to the bladder.

The genital tract, as differentiated from the urinary tract, is the most common seat of gonorrheal complications, owing principally to anatomical and physiological conditions. The inflammation attacks the ejaculatory ducts, and rapidly extends to the seminal vesicles. This complication is acutely painful, and is accompanied by high fever. The constitutional weakness may be marked. Diagnosis is made by rectal examination. The inflamed vesicle is hot, exquisitely tender to the touch, throbbing, and more or less swollen. The surrounding tissues may also be involved, leading sometimes to abscess formation, and in rare cases to a local or even a general peritonitis of an alarming type. There is also a very characteristic pain in the hip of the affected side, which radiates downward on the outer side of the thigh, and which may sometimes be mistaken for rheumatism of the hip-joint. In the severe cases with local peritonitis the symptoms bear a striking resemblance to those of acute appendicitis, from which of course it should be differentiated in suspected cases by rectal examination.

The gonorrheal infection may also attack the mucous follicles of the prostate, sometimes resulting in inflammation of the gland structure proper. It is quite likely, too, that peri-urethral abscesses may occur just beneath the wall of the prostatic urethra, which point towards and open into the urethral canal, and which are often improperly diagnosed as prostatic abscesses. The prostate is, however, very commonly, perhaps in every case, the seat of congestion and hyperemia, as the result of the posterior inflammation. There is a sensation of dulness and pain in the perineum and in the region of the rectum, with rectal tenesmus and painful defecation. When the prostate is examined, it is found tumefied to a variable degree, hot and tender, and projecting more or less into the lumen of the rectum. The inflammation of the prostate and vesicles may not be attended by subjective symptoms of any kind; hence the importance of making a rectal examination in every case of posterior urethritis.

Epididymitis is not an uncommon complication, and owing to the ease with which it can be diagnosed little need be said about it. It may occur at any time during the existence of an acute or a chronic posterior urethritis, and is liable to recur with each recurrence of the gonorrhea. The amount of pain and swelling is quite variable. Most patients are compelled to take to their beds very quickly, while some go about their daily work without interference. A prodromic symptom which the writer has often noticed, though never seen recorded, and which is of great value in announcing the approaching inflammation of the epididymitis, is the sudden disappearance of pus and shreds from the urine in the midst of a severe attack of posterior urethritis. This symptom may not be infallible, but it has been seen often enough to deserve serious recognition. When it appears an attack of acute epididymitis may be expected in from 24 to 48 hours. It is quite likely, too, that many of those mysterious cases of recurrent epididymitis without discover-

able cause, which are seen in elderly men in whom existing gonorrhea is not to be thought of, may be directly traced to long-forgotten attacks of gonorrhea in youth. Close study of these cases indicates that the epididymis may become inflamed many years after the disappearance of the urethral attack. At any rate, it is not uncommonly found that the urine in these cases contains shreds, which point to the presence of chronic urethritis of a very mild type.

Cowperitis or inflammation of Cowper's glands may be classed as one of the rare complications of gonorrhea. The diagnosis is made by the characteristic symptom; namely, a hard, painful tumor on one side of the median line, in the perineal region, rendering sitting and walking exceedingly painful or even impossible. The abscess may reach a large size, and rupture into the rectum or externally into the perineum.

The diagnosis of peri-urethral abscess, not an uncommon complication, is not usually attended with difficulty. The region around the frenum is the favorite seat for this complication, though the cellular tissue surrounding any part of the urethral canal may be attacked. In its early stages it may be mistaken for a chancre of the urethra; later, however, it grows in size, becomes painful and tender, and may finally suppurate. When it is situated along the membranous or prostatic urethra it may attain a considerable size, and constitute a mechanical obstruction to the urinary flow, even to the point of complete retention. When the abscess ruptures into the urethra urinary extravasation, with all its sequelæ, may follow. Rupture into the urethra of an abscess situated anywhere along the urethral tract is indicated by a sudden increase in the flow of pus from the meatus and a diminution or cessation of the pain.

A somewhat frequent and exceedingly painful complication is the inflammation of the joints, bursæ or tendon-sheaths, commonly known as gonorrheal rheumatism. Any joint, bursa or tendon-sheath may be attacked, and the degree of the inflammation may be mild or severe. The effusion may consist of serum or pus, or both, and often contains gonococci. In doubtful joint cases the wise surgeon always examines the urethra and the urine for evidences of acute or chronic gonorrhea, often with surprisingly happy results. The rheumatism may extend and cause an inflammation of the pericardium, with effusion. The pleura may also be attacked. One attack of gonorrheal rheumatism predisposes to others, which may recur with every exacerbation or new attack of gonorrhea.

Gonorrheal ophthalmia is the only one of the complications which can be positively prevented. The infection is carried to the eyes from the urethra by the hand, or by towels or clothing on which the gonorrheal discharge, with its gonococci, has been deposited. The symptoms are so typical that once seen the condition is not likely to be mistaken for anything else. Moreover, the presence of gonococci in the pus removes whatever doubt may exist as to the correct diagnosis. In considering the subject of chronic gonorrhea, with reference to its symptoms, diagnosis, and complications, it is well to remember that we have to deal with a chronic inflammatory process, similar in general to a chronic inflammation in any other part of the body. The pathological changes affect the epithelial lining of the canal, the mucous glands and follicles, and the stroma itself.

After an acute gonorrhea has lasted eight or ten weeks it becomes chronic. There may be few gonococci in the tissues, and they may with difficulty be reached; but they are factors to be reckoned with, for they are liable under the proper stimulus to reawaken at any moment and demonstrate their powers. It may be broadly stated, without fear of contradiction, that the case is rare indeed in which an acute gonorrhea has been so completely cured as to leave no gonococci in its wake. The anatomical structure of the parts involved, predisposes to and induces chronicity, owing to the difficulty with which the deeply lodged gonococci can be reached, for the posterior urethra and the adjoining genital tract are in nearly all cases the seat of this form of inflammation.

Lesions of chronic urethritis may sometimes be seen with the urethroscope. Numerous areas may be seen showing various degrees of congestion, excoriation and granulation. The inflammation of the mouths of the lacunæ and follicles can easily be seen in well-marked cases.

Objectively, the most frequent and annoying symptom of chronic urethritis is the discharge at the meatus, usually not more than a drop resting snugly between the lips of the meatus, and coming out into the world, when the host presses it from its resting-place with his fingers. This drop is best seen in the morning, after the accumulated secretions of the night have gravitated forward to the meatus. When the patient with chronic urethritis awakes in the morning, the first thing he is apt to do before breakfasting, is to "look at" his drop. He seizes his penis with both hands, hurls a few choice oaths at his doctor, and begins to milk the organ vigorously, thus collecting all the contained secretions, normal as well as abnormal, which he contemplates with feelings that are more easily imagined than described. The drop collected in this manner, contains mucus, pus and epithelial structure, and possibly gonococci.

In chronic gonorrhea the history is an important aid in making a correct diagnosis. It is not often to be accepted, however, without due allowance being made for the chaff that always goes with the wheat, for these patients, in the course of their wanderings from physician to clinic and back again, soon lose sight of their original trouble, and by a process of addition and multiplication acquire and present a group of symptoms that is quite appalling. It is for these unfortunates that the busy or careless physician prescribes a laxative mixture or a nerve-tonic,

with the injunction to "call again" when the bottle becomes empty, paying no attention whatever to the pathological conditions which are the basis of the existing neurasthenia.

The first thing to do in making a diagnosis is to follow the steps described in considering acute gonorrhea; that is, to examine the secretions, and determine whether the discharge comes from the anterior or posterior urethra, or both. Careful examination should then be made to determine the presence or absence of organic strictures in the urethra, care being taken to exclude reflex spasms. The prostate and seminal vesicles are then examined, and finally the urethroscope should be employed. With these measures a fairly positive diagnosis can be made without much difficulty, or liability to error. It may be added parenthetically that if it were as easy to treat this condition successfully as it is to diagnose it, the percentage of cures would be considerably increased.

Chronic anterior urethritis is not commonly seen alone. When it does occur the diagnosis can easily be made if the steps mentioned above are taken.

Chronic posterior urethritis presents many features of interest. In addition to the discharge there may be neuralgic pains, referred principally to the glans penis, and slight burning on micturition. Owing to the close intimacy existing between the genital tract and the nervous system many nervous symptoms are developed in the train of chronic gonorrhea. These symptoms range from slight pains in various parts of the body, to severe and complete melancholia. The sexual functions, and the digestive apparatus are most likely to suffer. Chronic constipation, and poor appetite are the rule. When the prostate and vesicles are inflamed and enlarged the pressure of the fecal masses during the act of straining at stool expels the accumulation of mucus and pus, which adds to the demoralization of the patient. To enumerate all these symptoms would constitute a treatise of no mean proportions. Suffice it to say that there seems to be no end to the number and variety of the neurasthenic symptoms which may follow chronic gonorrhea.

The important point to remember is that these symptoms are dependent upon the gonorrheal lesions somewhere in the genito-urinary tract. These lesions must be discovered and suitably treated, before the symptoms can be expected to disappear. An important aid in making these examinations is a meatus of normal size; and if the meatus be of subnormal caliber considerable relief from symptoms and better facilities for examination will be afforded by the operation of meatotomy. The prostate and vesicles, if inflamed, can be felt by the finger in the rectum. They are usually somewhat tender to the touch, and on pressure give the patient an indescribably sickening sensation, which makes him shrink from the finger. The vesicles, unfortunately, are not always within reach of the finger. In these cases little can be done to bring the organ within reach, except counter-pressure with the free hand on the groin of the same side.

The complications which were mentioned in connection with acute gonorrhea are liable to be associated with chronic gonorrhea, especially epididymitis and rheumatism.

In conclusion the writer would urge the great importance of making a correct diagnosis in inflammatory conditions of the urethra. If physicians were to pay more attention to this subject than they usually do, fewer advertising charlatans and quacks would be owning real estate and driving fast horses.

THE USE OF SALICYLATE OF SODIUM IN THE TREATMENT OF PNEUMONIA.*

BY A. FRANK TAYLOR, M.D.,
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IN the "Medical Record" of April 22, 1899, there appeared an article by Dr. Wm. Sebring of Kingston, N. Y., on the treatment of pneumonia with salicylic acid, which was so free from egotism and written in so modest a manner withal, that I could not help admiring the author's style. He commenced by saying, "A disease with a hundred remedies is a disease without a cure, and it may seem like a work of supererogation to add another to the list," and further on he remarks that he came to use it "through as egregious a blunder in diagnosis as a young physician ever made." He then gives a list of over one hundred cases treated with it with uniform success. Some of his patients were not only aged men, but intemperate as well.

From the middle of last January I have had 25 cases and have essentially followed the plan as given in Dr. Sebring's paper. In age my patients have ranged from an infant only twenty-two days old to a hard-working but frail woman of sixty years. Most of them have been children from one to six years of age. Out of the whole number thus far I have lost but one—the infant twenty-two days old, which did not live quite seventy-two hours after the commencement of the attack. One child of thirteen months had convulsions, with a temperature of 106⅗° F. and usual symptoms. Although this high degree of temperature was attained during three or four days, the child made an uneventful recovery, and in about 10 days was out of my care.

Another infant eight months of age, was unable to nurse for nearly 36 hours on account of the hurried breathing. Nourishment was given from a spoon, and prompt recovery followed the usual treatment. A woman, nearly sixty years of age, was apparently one of the most desperate cases it has ever been my fortune to treat with success. For 24 hours her breast, neck and lower part of the face were markedly cyanotic. Her lesion was a double pneumonia complicated by serious heart-trouble, which of course added much

* Read before the Broome County (New York) Medical Society, July 2, 1900.

to the danger. She also made a fairly prompt and a complete recovery.

The other cases were of average severity, but the hygienic surroundings of some of them were neither of the best nor conducive to recovery. The cases were not confined to any one locality, but were scattered over quite a wide area, some of them being as much as 10 miles apart.

The plan of treatment as given by Dr. Sebring was to give salicylate of sodium in eight or ten grain doses once in two hours, and also to use whatever other treatment the exigencies of the case seemed to demand. I did not follow him precisely, but to adults gave 15 grains salicylate of sodium once in four hours and medium doses of veratrum viride and aconite combined once in four hours until temperature fell, then lessened the salicylate, all the time using a mixture of turpentine and lard on the chest, with a covering of flannel and a rubber dam. In treating my cases this way I seldom found any necessity for using opiates, since whatever pain existed seemed to yield to the salicylate. A little codeine or heroin combined with muriate ammonia, etc., to alleviate the cough, was usually the only narcotic that entered into the treatment.

I fully realize that success in one or two cases with a certain line of treatment does not entitle it to perfect confidence, but when 25 cases, some of them of extreme severity, are brought to a successful termination, it certainly entitles that treatment to consideration.

It is not at all improbable that many physicians have used this mode of treatment, and that I have not been able to present any thing new. If such be the case it would be interesting to know some of their results. The plan is not original with me, but I have simply benefited by the broad experience of another.

MEDICAL PROGRESS.

OBSTETRICS AND GYNECOLOGY.

Chlorate of Potash in the Treatment of Habitual Abortion.—Probably the majority of cases of habitual abortion are caused by such systemic conditions as syphilis, and by such local lesions as metritis and deviation of the uterus. There are also alterations and degenerations of the decidua and placenta for which no good explanation can ever be given. Consequently one finds young women aborting, in spite of the well-known methods of correcting the tendency. S. REMY (Sem. méd., Sept. 24, 1902) has been experimenting with chlorate of potash in this matter in the following way: The method was originally suggested by Sudsen. Just as soon as the woman knows that she is pregnant he gives her 0.20 grams of chlorate of potash, and continues the treatment during the whole of gestation, except the last few weeks, lowering the dose to 0.15 grams. Thus far he has not seen one case of failure of the treatment, even in women who had always aborted previously. His theory of the action of the chlorate of potash is that it gives up its oxygen, in part at least, to the economy.

Ectromelus.—Complete ectromelus is rather a rare condition, partial ectromelus, affecting one extremity, much more common. JOHN H. MCGIBBON (Lancet, Sept. 20, 1902) reports a case of a female child in whom both the upper and lower extremities are absent. The stumps of the lower extremities end in fleshy nodules, but those of the upper extremities are rounded, as after an ordinary amputation. Bones may be felt in all the four stumps. The child is the fourth of the family. There is no history of shock or maternal impression, and no trace of any deformity in the other children of the family or their relatives. During the last stages of pregnancy the mother suffered much from pain in the abdomen. False labor came on, and persisted for 48 hours before the os relaxed. On account of this, he was called to see the case by the midwife in charge. The child is otherwise healthy and vigorous. On the nose is a large red birthmark.

Direct Examination of the Female Bladder.—Cystoscopy, as originally practised, is not free from many inconveniences. It necessitates, in brief, a preliminary injection into the bladder of a set quantity of fluid; but this fluid may in part escape, while that which remains behind perhaps becomes stained with the blood. The renewal of this fluid from time to time is also necessary, interrupting exploration. Moreover, the cystoscope itself does not furnish a direct image of the surface of the bladder. On account of these obstacles and others which are well known, T. DEHOTT (Sem. méd., Sept. 24, 1902) had advised the following means for inspecting the bladder directly. The patient lies upon an inclined plane, at 45 degrees, and the surgeon introduces into the bladder two curved retractors, about six cm. long and one cm. wide, which results in the entrance of a certain amount of air into the bladder, with a consequent dilatation. In the concavity of one of these retractors or valves a small incandescent electric lamp is fixed in such a manner as to permit the interior of the bladder to be well seen, and also, if necessary, catheterization of the ureters to be carried out. General anesthesia, without being necessary, is useful for rendering this examination easy and complete. This method of inspecting the bladder must necessarily be carried out with careful antiseptic precautions. He claims that this procedure has the advantage of being very useful and convenient. The amount of dilatation of the urethra is not enough to cause incontinence of urine.

Hysterectomy in Cancer of the Uterus.—The usefulness of surgical interference in cancer of the uterus seems very doubtful to anyone who attempts to gather statistics of results. Thus S. POZZI (Presse méd., Sept. 17, 1902), in a series of 204 cases, records but two cases of prolonged survival—one patient lived six years after her operation, and the other is still living after 10 years. Hysterectomy is not justifiable at all, writes this authority, where the neoplasm has passed beyond the limits of the uterus and caused this organ to become fixed to the surrounding indurated parts. The rôle of the neighboring lymph-nodes in terminal accidents and in postoperative recurrences has been exaggerated. Ureteral compression is rarely due to adenopathy, but usually results from the gradual infiltration of the neighboring cellular tissue. Postoperative recurrence is often due not to the disease of distant lymph-nodes but to the infiltration and subsequent ulceration of the cicatrix itself. Abdominal hysterectomy is a graver operation than the vaginal operation, inasmuch as it increases the chances of infection. It must be reserved for special cases, in which the vaginal operation is rendered difficult by extreme contraction or atrophy of the vagina, by the great friability or the disappearance of the cervix, or by the extensive invasion of the vaginal culs-de-sac. Where morcellation would have to be practised if the vaginal route were followed, as in volumi-

nous cancer of the body of the uterus or in cancer complicated with fibroma, pregnancy, pyometra or pyosalpinx, laparotomy may also be preferable. In cases of extensive induration the abdominal operation permits the surgeon to follow neoplastic train and above all to free the ureters from tissues which have lost their pliancy. Vaginal hysterectomy remains the operation of choice in cases in which the uterus is still movable and the neighboring parts pliant.

Extirpation of the Uterus Through the Vagina.—In reporting a case of carcinoma of the uterus, complicating the sixth month of pregnancy, and necessitating the removal of the uterus through the vagina, E. SCHROEDER (C'blatt Gyn., Oct. 4, 1902) presents the following points on the position held to-day relative to the choice of methods for doing such an operation. The rather unfavorable prognosis with respect to a permanent cure which, up to the present time, extirpation of the uterus by the vagina during pregnancy has given, would indicate that so far as this patient was concerned, a more suitable method should have been chosen. Schuchardt's procedure for the radical removal of the uterus through the abdomen was duly considered, but was rejected because the writer is one of those authorities who are not yet convinced of the undoubted value of this method. He grants that the abdominal operation is a radical one—indeed, much more so than the vaginal—but unfortunately the facility with which it can be accomplished is not always present in a given case. Moreover, the difference between an upper and the lower routes for the removal of these cancers, from the standpoint of permanent cure, is so slight that it is probably unfair to subject the patient to the added risk of the more serious operation.

NEUROLOGY.

Tumor and Abscess of Brain.—A few interesting cases of cerebral tumor and abscess are reported by S. KOPCZYNSKI (Zeitsch. klin. Med., vol. 46, Nos. 1-4). In the first the diagnosis of cerebellar neoplasm was made owing to the very prominent general symptoms (intense headache and nausea, choked disk with atrophy), cerebellar gait and involvement of a large number of cranial nerves. A sign, which greatly aided in determining the side of the lesion was the presence of widely dilated veins over one half of the head and face. The affection of the cranial nerves more on one side also aided in this direction but not the unilateral spastic paresis with paresthesiæ since these occur only in half the cases on the same side. Similarly the tendency to fall in one direction may be misleading. The second case, also a tumor cerebelli was remarkable owing to frequent attacks of tonic convulsions of the neck and back muscles which were accompanied by a much slowed, irregular pulse, superficial and irregular respirations, salivation and difficulty of deglutition, no doubt resulting from pressure on the medulla oblongata. The knee-jerks were absent at one time and increased at another. The third patient was found to suffer from a tumor at the base in the neighborhood of the pons, since an alternating hemiplegia was found. The choked disk here was on the side opposite to the tumor. Case four proved to be a temporal abscess which, owing to marked choked disk, epileptic attacks dating back several years, and the absence of all etiological factors, was first regarded as a tumor until the marked somnolency and rapid development of total hemiplegia led to the proper diagnosis. Though the exploratory puncture was negative, a large abscess was found on autopsy. In case five an abscess of the frontal lobe could be suspected owing to onset with chill, constant stupor, slowed pulse, and slight rise of temperature. Much easier, from a diagnostic point than all these cases was the last one, where discharge from the ear, coma and facial paralysis pointed to abscess. Yet meningitis had to be considered, but was improbable, owing to absence of fever and symptoms of meningeal irritation and presence of a slow pulse and somnolency.

Arsenical Neuritis.—A good account of arsenical neuritis, based upon the observation of three cases is given by W. SANOWSKI (Zeitsch. klin. Med., vol. 46, Nos. 1-4). Both acute and chronic intoxication may include paralysis, but the former is rare, since death generally sets in too rapidly. The most frequent causes of the latter are arsenic eating, the therapeutic misuse of such preparations as Fowler's solution, intimate contact with stuffed animals, which are often prepared with a strong arsenic paste, the living in rooms with green wall-paper, and lastly certain trades in which the metal is freely used. The course is very much the same, no matter whether the intoxication is acute or chronic, and the time of development of the nervous symptoms varies considerably in the chronic cases and in the acute, generally by about the tenth day. There are first pains in the extremities, which subsequently become paralyzed; then follow the paresthesiæ, and finally the paralyses, with atrophy, contractures and ataxia. Trophic and vasomotor disturbances are irregular as to the time of their appearance. The most frequent seat of the paralysis is the lower extremities, but the other limbs and the cranial motor nerves may also be involved, and the onset may be in the arms. Ultimately, in most cases all four limbs are affected. In the diseased parts, the most distal portions suffered most severely, and in the legs the perineal and anterior tibial muscles are generally paralyzed first, together with the extensor longus hallucis, digitorum communis, and the interossei of the thigh muscles. The vastus externus seems to be most vulnerable, while in the upper extremity the order is, radial, median and then ulvar muscles, the internal interossei but rarely escaping. Of all the types of neuritis, contractures are most frequent in the arsenical, and not rarely surgical aid is demanded to correct them, though with energetic treatment much may be done. Signs of motor irritation are not rare in the form of muscular tremor and even athetoid moterus and tonic contractions. The atrophy often reaches a pronounced degree. Turning now to sensory symptoms, it is found that the pains are generally the first and most persistent, and they vary much in their severity, character and position. The most common of paresthesiæ is formication. Pressure on the nerve-trunks may be intensely painful, and not less so pressure on the muscles directly. The various sensations are affected as follows: The tactile sense is diminished or absent, leading to anesthesia of the fingers and toes and even of the hands and feet, and the transition between the two zones is a gradual one; the sense of pain is heightened; the temperature-sense is normal or diminished; the sense of pressure and localization is normal, and the muscular sense is diminished or absent in the peripheral parts. A prominent symptom, which has been too often disregarded, is the diminution or absence of the stereognostic sense by means of which the form and contours of an object are determined. Finally, the electrical sense is more acute. Reaction of degeneration may be present; the skin-reflexes are most often normal, the tendon-reflexes absent. A number of different vasomotor symptoms may occur, such as eruptions, swelling of the feet, coldness and cyanosis, fever, sweating of hands and feet, etc., while trophic disturbances are pigmentation, glossiness, malnutrition of hairs and nails, etc. In a few cases the bladder and rectum seemed to be affected. Ocular disturbances are rare, but amaurosis and even optic neuritis have been described. Disturbances of hearing are still more rare, and psychical symptoms are likewise not

much seen. The course and duration depend upon susceptibility and degree of poisoning. The patients are generally entirely well in one and one-half years, the prognosis is good, and recurrences only come with renewed exposure. The first principle in the treatment consists in the removal of the poison. The pains are to be controlled, and iodide of potassium often does good service. During the later stages electricity and massage are in place.

PEDIATRICS.

Buttermilk for Nurslings.—An instructive account of a series of clinical tests of buttermilk as a food for infants of nursing age is that of B. SALGE (Jahrb. Kinder., Bd. 55, S. 1.), who utilized this means for the nourishment, partial or complete, of 119 infants. The milk used was recovered from sour cream and contained 2.5 per cent. of albumin, 0.5 to 1 per cent. of fat, and from 3 to 3.5 per cent. sugar. The acidity equaled 7 c.c. normal NaOH for each 100 c.c. of buttermilk. The milk should be used within 24 hours after churning, and must be obtained from a reliable source. The ordinary buttermilk of the shops is unclean and dangerous. The buttermilk used in Hebner's clinic is prepared as follows: Fifteen grains of wheat-flour are stirred up with a tablespoonful of cold buttermilk; the remainder of the buttermilk is then added, together with 60 grams of sugar. This preparation is slowly heated, being meanwhile constantly stirred; the milk is allowed to boil up in about 15 minutes, and is then poured into previously sterilized bottles, closed with rubber stoppers. Further sterilization is unnecessary. The nutritive value of this mixture is very high, being 714 calories per liter. Most infants readily accept this food, either alone, or alternately with "malzsuppe" or with human milk. The stools of infants so fed are normally of moderate volume, slight odor, neutral or slightly alkaline reaction, homogeneous and yellow. The absorption which occurs is estimated at 90 per cent. of albumin, 93 per cent. of fat. Buttermilk was tested with satisfactory results as the first food given after acute digestive disturbances. Among 119 cases the results of buttermilk-feeding were satisfactory in 85 instances. Of the 34 infants who did not thrive on this diet only four were successfully nourished by other means; 30 failed to do well on any other diet, several going into decline even when entrusted to wet-nurses. In large clinics the low price of buttermilk is an important consideration.

Mercurial Flannel in Syphilis.—As a substitute for the ordinary methods of administering mercury in syphilis it is proposed by BOUVERON (Gaz. Lebdom. med. et Chir., Sept. 18, 1902) to use bandages impregnated with mercury. Prepared by Bouveron's method, these bandages contain about 10 grams of mercury per running meter. The patient winds a meter of gauze about his neck before going to bed; absorption of the drug proceeds during the night with sufficient energy to produce promptly an intense mercurialization of the organism. This method is similar to that previously proposed by Merget and has been made the subject of a series of experiments at Bordeaux. The dose of mercury disengaged by the flannel is proportionate to the evaporating surface. The method is apparently analogous to common inunction.

Albumosuria in Diseases of Children.—The significance of albumose in the urine has been studied clinically by P. VALVASORI (Pediatria, Year X, No. 8, 1902), who finds that in inflammatory conditions (intestinal and bronchial catarrh, bronchitis, bronchopneumonia) increase or diminution of albumosuria constitutes an indication of extension or regression of the morbid process; and from the quantity of albumose in the urine the severity of the malady may be gauged. Of even greater import is albumosuria in suppurative conditions such as empyema, hepatic abscess, etc., in which the intensity of the albumose reaction may be considered as an index of the virulence of the pyogenic organisms and of the destructive process going on in the tissues. In like manner does decrease of albumose point to approaching resolution. In specific inflammations such as tuberculosis, albumosuria is a frequent symptom; the amount of albumose being less in localized forms. In ileotyphus and varicella albumose appears almost constantly, and for the most part in the advanced stages and when the morbid process is declining. Among nervous diseases, chorea is not infrequently accompanied with albumosuria generally of short duration; and the symptom does not seem to bear any relation to the period of the disease or to its gravity. Albumosuria does not occur in anemia. In none of the conditions named, does heteroalbumose appear in the urine.

Buttermilk in the Feeding of Sick Infants.—Lauded by the Holland physicians and prepared according to their prescriptions, buttermilk is a good therapeutic aliment for infants affected with acute or chronic diseases, according to A. BAGINSKY (Rev. Hy. et Méd. Inf., Oct., 1902). The buttermilk used in the author's experiments contained cream rendered acid by the lactic-acid fermentation, and freed from the greater part of fatty matter by the extraction of butter. It was delivered as fresh as possible and the cream exposed no longer than 24 hours to the lactic-acid fermentation. It was then treated as follows: To a liter of buttermilk there were added 25 grains wheaten flour and 35 grains cane-sugar. It was then put to boil for at least two minutes, mixed continually and allowed to boil over three or four times. It was then placed in bottles previously sterilized in boiling water, stoppered with sterilized corks, and placed in the refrigerator. Before serving it was raised in the water bath to the body-temperature. Thus prepared, buttermilk seems to represent *a priori* no less than the equivalent from the chemical standpoint, of the ideal nourishment of the infant. It is well borne sometimes after the acute crises of dyspepsia and diarrhea with vomiting. Employed as an aliment and as a remedy, it can absolutely save lives of infants attacked with chronic diseases of the stomach and intestines. As to its utility when employed as a food for a long time, it is not possible to say until a greater number of observations have been made. Neither rickets nor scurvy has been observed following its prolonged use.

BACTERIOLOGY.

Cultivation of Lepra Bacillus.—A successful attempt to grow the bacillus of leprosy is reported by G. VAN HOUTUM (Jour. Path and Bact., Sept., 1902). A mixture composed of one-third beef broth and two-thirds fish broth proved to be the best medium for at 36° C. there occurred within 24 hours a general turbidity, and at the bottom of the tube a small viscid, coherent deposit. In the hanging-drop the bacilli were either single or in chains, and many moved slowly though distinctly. After the bacilli had for several generations grown on this medium they also grew on beef broth, provided this had an alkaline reaction on agar, the colonies appearing first as dewdrops. After three days they showed a more or less white center and transparent margin, which later became less transparent and even indented or fan-shaped. In 24-hour stab-cultures in gelatin the cause is marked by minute greyish colonies, while on the surface a slight, thin pellicle is formed. Arborescence was soon noticed, and by the fourth or fifth day, liquefaction. The bacilli stain well

with Löffler's methylene-blue, with Nicolle's carbol thionin, and with dilute carbol fuchsine, and are decolorized by Grani's solution. Degeneration forms occur in older cultures. The author concludes: (1) That he has cultivated from leprous tissue a bacillus that differs from Hansen's bacillus in staining-reaction and size, and that this leprous tissue contains many lepro bacilli, apparently in a pure state; (2) that these bacilli, mixed with diluted human serum, show the Pfeiffer-Bordet reaction in vitro, leper serum acting much more markedly than non-leper serum; (3) that the reaction of leper serum is brought about by the concurrence of two substances present in leper serum, the sensibilizer and the alexins, and that the reaction of the non-leper serum is only to be attributed to the alexins; (4) that this sensibilizer, which attaches itself to the described bacilli, only occurs in leper serum; (5) that experimental researches have proved that the sensibilizer is a specific substance, that there exists a causal connection between the micro-organisms or cells and their sensibilizer, and that the occurrence of a sensibilizer is a general law in immune sera; (6) that the bacilli which he has cultivated and described are the true agents of leprosy, because leper serum and leper serum alone contains a sensibilizing substance for them; (7) that the susceptibility of leper bacilli to the action of leper serum, even in weak dilutions, gives a plausible explanation to the numerous failures to cultivate these bacilli.

Sterility of Bile.—A number of experiments were conducted by E. S. CARMICHAEL (Jour. Path. and Bact. Sept., 1902) to study the effect of injection of micro-organisms into the portal system on the sterility of the bile in the gall-bladder. Typhoid and colon bacilli and streptococci were used and in all experiments, with the exception of one, after the injection of varying quantities from five minims upward the bile remained sterile and in its normal condition, showing that although the general blood-circulation be teeming with germs none can pass through normal hepatic tissue. It is, therefore, probable that infection of the bile from the gastro-intestinal tract does not take place through the portal vein and liver.

Influence of the New Tuberculin on Metabolism.—In order to obtain a clearer view of the action of tuberculin, a series of experiments on man and the lower animals has been made by J. MITULESCU (Deut. med. Woch., Sept. 25, 1902). The results of this research seem to contradict the former conceptions about the effect of tuberculin on metabolism. The injections were given in cases where the nutriment and the excreta were carefully measured, and from his observations the author believes that no cellular destruction takes place. On the contrary, the tuberculin is well borne as a therapeutic measure when given in small, carefully increased doses, and is of advantage in bringing about a "nutritive cell-proliferation," an appreciable increase in the protein constituents, and a progressive formation of "immune bodies," which lower the vitality of the bacillus and neutralize its toxins.

Transmission of Tuberculosis.—The question of the communicability of human tuberculosis to cattle has lately received renewed attention. A. MOELLER (Deut. med. Woch., Oct. 2, 1902) finds as the result of numerous experiments on cattle and goats that healthy calves do not become infected with tuberculosis if human tuberculous sputum is fed to them or is injected subcutaneously, or if pure cultures are inhaled, given by intravenous or intraperitoneal injection or introduced in toto under the skin. In goats also no infection takes place even when enormous numbers of bacilli are mixed with the food. Intraperitoneal injection of large quantities may cause the formation of peritoneal nodules, but in no case did a general involvement of the organism result.

PATHOLOGY.

Chemical Contributions to the Study of Amyloid Degeneration.—In a research conducted on the nature of amyloid substance, A. MONERY (Jour. Phys. et Path. gen., Sept. 15, 1902) was not able to obtain the sodium salt of the chondroitine-sulphuric acid obtained by other investigators. The bodies isolated had a greater content in nitrogen and sulphur, which enabled the author to classify them with derivatives of chondroitine-sulphuric acid, like glycosamin. There is new proof strengthening the theory of Morochewetz that the albumin united to the chondroitine-sulphuric acid in amyloid, is a nucleo-proteid. Perhaps here is a new contribution to the etiology of amyloid degeneration. This is seen in cancer, characterized by a hypernucleosis and an intense cellular destruction, but it is also established in old suppurations—arthritis, osteomyelitis and tubercular osteitis. In all these cases the red blood-cells are destroyed in great numbers and augment strongly the quantity of nucleine in the economy. Tchermak states that amyloid degeneration is accomplished not by local or intracellular metamorphosis, but by the deposition of the amyloid substance in the degenerated organs, this substance being brought by the leucocytes. The nucleines abound above all in the hematopoiëtic organs; it is there that waxy degeneration is most frequently found. It is therefore possible that the organism retains the nucleines in order to manufacture amyloid in combining them with chondroitine—sulphuris acid, or its derivatives, and here still can be stated the application of the biological law after Krawkow, "that pathological processes and their products have their physiological models."

Pathology of Chronic Specific Dysentery.—A chronic form of dysentery is described as of frequent occurrence by C. F. CRAIG (Am. Med., Oct. 11, 1902), and is considered specific, since the blood-serum gives an agglutination reaction with pure cultures of the Shiga bacillus, and since in a few cases this germ has been found in the intestines. Three classes are recognized the follicular diphtheritic, and gangrenous varieties according to severity. The feces in the follicular stage are characteristic as a whole, yet it would be unsafe to diagnose this stage from an examination of the feces alone. In number they vary greatly, usually from three to 20 during the 24 hours, and when a strict milk diet is given the consistence is that of very thin mush, milk-curds being often observed. The color is from white to yellowish-green, gray or brown. Little blood is present, but enough mucus and pus, and the odor is not very offensive. Intervals of constipation, and again of more watery stools with specks of mucus and pus, are common. The bacterial flora is varied and extensive. During the diphtheritic stage the stools constitute a serous body in which are suspended pieces of pseudomembrane, cells and particles of mucous membrane, mixed with blood, mucus, pus and undigested food. In the gangrenous stage a thin, slimy sirup is voided, of dark color, offensive odor, and full of necrotic shreds. On postmortem examination it is found that the follicular ulcerations are confined almost entirely to the large intestine; the ulcers had undermined edges, and a larger diameter at the bottom than at the top; their general appearance was as if stamped out, and the floor consisted of the submucous or muscular coat. In the diphtheritic stage there were large areas of necrosis covered by membrane, and the gangrenous form merely presented an intense type of this, with almost total destruction of the mucous and submucous coats, the patients generally also suffering from septicemia with metastatic abscesses, notably in the

lungs. In considering the question of the etiological relation of bacteria to this dysentery, a most complex problem is presented, and it is more difficult to be sure of the incitor of the chronic form than the acute, since so many different forms of bacteria are found, and it seems most probable that more than one is at fault, especially in the later and gangrenous stage.

Pathology of Fibrinous Bronchitis.—While there is considerable discussion as to the nature of the sputum, whether fibrinous or mucoid, in fibrinous bronchitis, there is still more doubt as to the pathology of the condition, owing to the rare opportunities of performing autopsies. H. HOCHHAUS (Deut. Arch. klin. Med., Vol. 74, Nos. 1 and 2) reports a case where the sputum consisted undoubtedly of mucus with bronchial epithelium and polynuclear leucocytes. A bacteriological examination only showed a few streptococci. On autopsy it was found that in the finest bronchi the epithelium was intact; in the lumen there was an eosin-tinged mass, and externally a small round-cell infiltration. In the larger bronchioles there were epithelial defects, and hence the mass was richer in cellular elements, which increased with the size of the air-passages until these become cartilaginous, when the entire change was less severe. It follows that the process consists of a secretion of mucus with desquamation of the lining epithelium induced by a severe inflammation of the bronchial walls. The parenchyma of the lung does not seem to be involved in the process. The autopsies published on cases in which, unlike the author's, the sputum was fibrinous, showed very much the same anatomical conditions as mentioned here, and the microscope does not explain the varying character of the excretion.

MEDICINE.

Acroparesthesia Following Trauma.—According to Oppenheim acroparesthesia is due to an extraordinary irritability of the vasomotor center, as a result of which the arteries are contracted and the nutrition of the sensory nerve-endings in the extremities is damaged. The most pronounced and often the single symptom consists of disagreeable sensations, occurring in paroxysms, in the hands or feet. These sensations are felt most acutely at night or just after the morning awakening. At times distinct pain is felt, which may be sufficiently acute to arouse the patient when asleep. By rubbing the parts the pain may be diminished, or the peculiar sensation modified or temporarily banished. Stiffness may be felt to such a degree as to prevent the finer muscular coordinations. The distribution of the sensations does not correspond to any definite nerve-supply; usually the affected area does not show any lessening of cutaneous sensibility. There is no local tenderness, the nerve-trunks are not sensitive to pressure, and there is an absence of grave motor disturbance. The course of the disease is chronic, occasionally intermittent; its development is almost invariably gradual. Etiology and pathogenesis are far from clear. The causes usually assigned are climacteric disturbance, cold and excessive muscular exercise. A case described by Cassirer was attributed to trauma, and M. SOMMER (Berl. klin. Woch., Oct. 6, 1902) reports a case in which, after a contusion of the left hand, the patient recovered so rapidly as to be able to resume his work in two days, although paresthesia later developed. After an interval of four months numbness, rigidity, and pricking sensations were first felt. Physical examination discovered nothing beyond tortuosity and rigidity of the radial artery. No anatomical explanation of the patient's symptoms was found, nor was there any evidence of constitutional neurosis. Treatment was ineffectual. Sommer regards trauma as at least the exciting cause of the trouble, but is doubtful concerning the etiological importance of the beginning arteriosclerosis and of the patient's occupation—that of a boiler-tender—which exposed him to dry heat during a considerable part of each day. The lack of a satisfactory explanation of such cases too often leads to the hasty accusation of malingering.

Cystitis in Typhoid Fever.—Two distinct classes of cystitis are recognized by H. E. J. BISS (Ed. Med. Jour., Oct., 1902) in typhoid fever—those in which it is directly caused by retention, and perhaps by unclean catheterization, which cases may or may not be specific, and those, on the other hand, which are spontaneous in origin and certainly specific. Concerning frequency, the medium and severe cases seem to suffer most often; the sexes are affected equally, and no differences are noted as to age. The average date of the appearance of bacilluria is the forty-third day; of cystitis, the thirty-sixth. None of the theories which seek to account for a pathological basis are quite convincing, but it seems most likely that a multiplication of the bacilli takes place in the bladder. Sometimes not the typhoid, but the colon and other bacteria, are the cause of the cystitis. Concerning treatment, urotropin should be given as early as possible without waiting to diagnose the bacillus. Of this 20 grains may safely be given every four hours, and the administration should not be stopped too soon. Some forestall the appearance of a cystitis by giving the drug throughout the disease.

Tuberculosis of Heart and Pericardium.—Cases of tuberculous myocarditis are rare, and tuberculous pericarditis, while more frequent, is nevertheless not so often met with as might be expected from the frequency of the disease in the structures immediately in relation to the heart. The muscular system generally and the cardiac muscle in particular seem to be able to withstand tuberculosis markedly better than any other tissue in the body. The cause of this is not well ascertained. The disease usually manifests itself in tissues which are in a state of comparative rest, or where the blood-stream is slowest. There is no other situation in the body where there is such frequent movement as in the heart-muscle, and the rate of the blood-flow through the coronary arteries is considerably greater than in parts more removed from the heart. These two conditions are therefore inimical to the settlement and proliferation of the bacilli. In addition to these the pure state of the blood, the products resulting from the muscular contraction, and the simple mechanical action must all be against the settlement of the tubercle bacillus. Taken in conjunction with these, the length of time the bacillus requires before it can grow and multiply, it is scarcely surprising that the disease is so rarely found affecting this organ. Two cases are published by W. M. SMITH (Ed. Med. Jour., Oct., 1902) in which the conditions were more favorable in that the lease of the heart was firmly bound down by an inelastic mass of degenerating gland and by an adherent lung, and the pericardial layers were grown together and greatly adherent so that the heart's action was enfeebled and the period of rest diminished. Similar conditions are found in most cases.

Diagnosis of Tuberculous Pleurisy.—Different authors have given different percentages as indicating the frequency with which an exudative pleuritis is tuberculous and very high numbers are given by the French school. Yet, as pointed out by J. A. GROBER (Deut. Arch. klin. Med., Vol. 74, Nos. 1 and 2), one often has considerable difficulty in determining the presence of the bacillus, even where there is no question as to the nature of the exudation. As cause for this it is possible that the bacilli are thrown down with the masses of fibrin, or that they remain in the

walls of the pleura without entering the pleural fluid. There is only one method, the injection into animals susceptible to tuberculosis, which leads to frequent positive results. The guinea-pig is the best animal to use, and there should be certain definite rules as to the amount of fluid injected and site of injection. By ordinary care it is possible to rule out all accidental infection which would tend to make the results untrustworthy. In 10 c.c. there is in the majority of all cases enough of the infecting agent present to kill healthy guinea-pigs whose susceptibility by the intraperitoneal method is almost absolute. Of the exudates examined —which did not include those undoubtedly tuberculous, nor those without question not so, but constituted the class spoken of as idiopathic or cryptogenetic—half to one-third were proven to be tuberculous by this method.

Observations on the Thyroid Gland.—Reviewing the various experiments on dogs, W. EDMUNDS (Jour. Path. and Bact., Sept., 1902) finds that after complete excision of the thyroids and parathyroids the great majority of animals die within a few days and cannot be saved by thyroid feeding, but that a small minority survive even the complete operation. In operations where one or more of the parathyroids are left, the dogs as a rule survive, while when only thyroid proper is left, as a rule they die. With respect to operations which would paralyze secretory nerves, if any, of the thyroid, the dogs often die, although possessed of the whole of one thyroid lobe, together with the parathyroids of the same side, or even if possessed of the entire thyroid system. With respect to the microscopic appearances of the parts left in the experiments, the parathyroids seem merely to hypertrophy; they do not change into thyroid tissue proper. The thyroid tissue left may remain unaltered, even though the dog may die of athyroid symptoms; or it may materially alter, and this in one of two ways: Either the colloid diminishes, the vesicles become enlarged and the lining membrane convoluted, or the colloid may disappear, the vesicles may retain their round shape, and the secreting cells may multiply into and fill the cavity of the vesicle, the entire picture resembling carcinoma. In the central nervous system changes have been found corresponding to the paralytic symptoms; the lesions that occur are observed mainly in the large cells, and vary from a chromatolysis of the Nissl granules to a complete destruction of the cells.

Anasarca in Malaria.—Acute attacks of general oedema accompanying malarial poisoning are rare, but are said to occur at times in the Southern States. Two cases are reported by F. L. MORSE (St. Louis Med. Rev., Oct. 18, 1902), who was unable to discover any changes in the heart or kidneys which might be held responsible for the general and pronounced anasarca. Although the patients had lived in the South, yet their physical condition would preclude the possibility of anemia or cachexia being the cause of the trouble. Quinine and Fowler's solution were sufficient to rapidly clear up both cases.

SURGERY.

Lumbar Hernia.—The matter of protrusion of any viscus from its normal bed into another part of the body, through some anatomical or traumatic path, is one that has interested the medical profession as long as it has existed. Among the more rare forms of hernia, those in the lumbar region stand first in importance. Concerning these, the following conclusions are offered by R. VON BARACZ and A. BURZYNSKI (Arch. klin. Chir., 1902, B. 68, H. 3). There exists under normal conditions, near the middle part of the upper and lateral region of the loin, a constantly found space, which is protected only by the thin, tendinous part of the transverse abdominis muscle. This is called the tendinous lumbar space, and is the weakest part of the loin. The weakest single point in this field is the canal through which the subcostal artery, vein and nerve pass. This point is often that one chosen as the exit for abscesses, which proceed from diseases of the dorsal vertebræ, and it is also chosen for the canal of escape of lumbar hernia. In children and adults who have a very short twelfth rib, there extends to the eleventh rib a considerably wide space of this character. There is a space all too weak by the natural anatomy of the part, and rendered still more so by the exit of the eleventh and twelfth costal nerves and vessels. The triangle of Petit is also a point of exit for hernias. Another area of diminished resistance in the region of the loin is in the middle of this triangle of Petit, especially along the tendinous portion of the latissimus dorsi muscle, just above the crest of the ilium. Through this there issues the lumbar branch of the iliolumbar artery and vein; through this, occasionally, abscesses which take their origin from the lumbar vertebræ also point. Also, hernias find it a convenient point of exit.

Colostomy and Ileostomy.—The necessity for making an abnormal opening into the bowel at various points was recognized many years ago. Since that time various methods have been suggested for making artificial anuses, but they have not stood the test of long use. The difficulties of making them so as to be within the control of the patient have led to the pronouncing of practically every method more or less a failure. C. HOFFMAN (C'blatt Chir., Oct. 4, 1902) brings forward the following technic as giving, or at least promoting control by the patient. The various details of the operation he describes as follows: The loop of the intestine which has been chosen for the point of making the artificial anus, no matter whether it is a large or small intestine, should be, so far as possible, stripped or milked clean of fecal matter in both directions for a considerable distance, by the stroking of it between the thumbs and forefingers of both hands. After this has been accomplished it should be separated from the rest of the intestines and held against the abdominal wall by gauze packing. On the free margin of the intestine, that is, opposite the point of attachment of the mesentery, an opening of suitable length is made. Into this a rubber tube is passed which has been cut on one side, and on the other side has a silk thread wound around it. This tube is passed in such a direction as to be in the fecal stream, and for a distance of five cm. a suture of catgut secures the rubber tube in the opening of the gut, and when properly applied makes a water-tight joint about the tube. Other silk sutures, which do not take in the wall of the tube, also reenforce this mechanical stopping much in the manner of Witzel in the case of the stomach. The exact mechanical method of applying these sutures depends somewhat upon each case, but a little ingenuity will accomplish the purpose. The abdominal wall is now punctured at such a point as will permit this tube to be drawn out of it by means of the silk thread at its free end. This secondary opening must necessarily be quite near the original incision for the operation. It is well to evert one flap of the original wound sufficiently to permit of sewing the parietal peritoneum to the intestine at the point of exit of the tube. When this is done it will be seen that an oblique canal is accomplished through the abdominal wall by means of the tube which, when removed, will leave the opening behind it in such a condition that the patient has very fair control of the feces. It is necessary to employ a rubber tube whose diameter is as nearly as possible that of the intestines in order to preserve a due pro-

portion between the supply of feces from above and its evacuation from below.

Tuberculous Peritonitis.—Since the surgical treatment of tubercular inflammations of the peritoneum was stumbled upon by chance the excellent results have awakened great interest in our endeavors to explain the rationale of the treatment. T. E. POTTER (St. Louis Med. Rev., Oct. 11, 1902), in discussing the point of entrance of the tubercle bacillus in causing peritonitis, although not denying the possibility of a direct and rapid infection through the intestinal tract and mesenteric glands, yet lays stress upon the probability of the peritonitis following upon a long-standing latent infection of various parts of the body, especially the lungs and lymphatic glands. Congestions or impairment of the healthy condition of the peritoneum may lead to the development of the disease. In this connection he points to the frequency with which the Fallopian tubes and ovaries are affected by this disease, and offers as a possible cause the periodical congestions which take place in the pelvic cavity. Severe constipation he offers as another factor of causation. In diagnosis, Da Costa mentions the presence of nodules around the rectum and in the sacro-uterine ligaments as significant points to be noted. In explaining the benefits to be derived from simply allowing the fluid to escape, air to enter, and from immediate suture of the wound, much has been said, but very little definite knowledge is to be had. The freeing of the fluid eliminates the toxins which have been accumulating and which are very poisonous, and therefore great assistance is given to the system in its combat with the disease. In reference to the entrance of air we know that the tubercle bacilli never attack a large open wound, but are more liable to attack small or contused wounds or those in which stasis is present. Phagocytosis is supposed to play an important part, and the air may so inhibit the germs, at least temporarily, as to allow the leucocytes and tissue cells to get in their work. Morris suggests and claims to have proven by experiment that the entrance of air adds saprophytic bacteria to the peritoneum, and that these tend to hold the specific inflammation in check, at least for a sufficient length of time to allow the nuclein brought by the polynuclear leucocytes to destroy the bacilli and their toxins. Drainage with a rubber tube in the lower angle of the wound is recommended so long as there is any discharge, and irrigation with salt solution is also urged as being beneficial.

Deductions From Laparotomies for Gall-stones.—Between the years 1890 and 1902 laparotomy for gall-stones was performed 720 times by KEHR of Halberstadt (Berl. klin. Woch., Oct. 6, 1902). His observations will aid others in diagnosis. It appears that icterus is wanting in 80 per cent. of cases of stone in the gall-bladder and cystic duct, and that it is absent even in 30 per cent. of cases of stone in the hepatic and common ducts. Operation may be imperatively demanded when palpation of the liver and gall-bladder are negative. The so-called "natural cure" by the spontaneous formation of fistulous connection with the intestine is often no cure at all. Kehr operated in 30 such cases, and almost invariably found that stones remained behind where they could cause trouble. The true function of internal medication is not to dissolve and remove the hard masses, but to provide rest for the biliary system, and by abolishing inflammation to substitute a latent for an active cholelithiasis. The use of vibration-massage in the presence of an inflammatory process is highly objectionable. Only after a vast operative experience is a special diaghosis of location and character of the obstruction possible; but such an anatomical diagnosis is possible, and on it depends the decision between a Carlsbad cure and an operation. Of 195 cases, only 100 required operation, in Kehr's judgment. In cases of light colicky attacks with intervals of complete latency (absolute absence of tenderness) Kehr would not operate. As a rule a single attack of acute obstruction of the common duct does not justify operative interference. If the icterus continues despite internal medication and is accompanied by absolute loss of appetite and failing strength, palliative treatment must be abandoned. Frequent, severe colic, failure to pass stones, associated with palpable failure of general health and involving interference with the patient's occupation, demand operation. Cases of hydrops and empyema of the gall-bladder with pericholecystitis are to be regarded as surgical. Chronic sufferers who have become addicted to morphine should be treated surgically at once and broken of the morphine habit during the postoperative period. Carcinoma of the gall-bladder is rarely cured by surgical means, because diagnosis is not made early enough. Men, and especially fat men, bear gall-stone operations very badly. Women who have borne children are the best subjects. Poor patients need to be operated oftener than rich, because the former lack the means for long courses of treatment either at Carlsbad or at home, and the attacks interfere more seriously with their means of livelihood. Operations should be avoided if possible in the presence of diabetes, arteriosclerosis, chronic nephritis, lung-disease and heart disease. Among Kehr's earlier operations cholecystotomy predominated; with increasing experience cholecystectomy and drainage of the hepatic duct became more and more frequent. In 12 per cent. of all cases gastric affections were present. Three patients were over seventy years of age at the time of operation; all three recovered. Kehr has entirely abandoned suture of the choledochus and now practises drainage of the hepatic duct, preferably in combination with cholecystectomy.

Removal of the Appendix.—Under what circumstances it is advisable to remove the vermiform appendix when the abdomen is opened for other reasons has been made the subject of an inquiry by H. A. KELLY (Jour. Am. Med. Assoc., Oct. 25, 1902). Well-known surgeons of this country to the number of 80 were addressed on the advisability of removing under these circumstances (1) a normal, or (2) a slightly adherent appendix, and in answer to the first question came 44 unqualified negatives and 26 affirmatives, while in answer to the second question 60 unrestricted affirmatives and seven negatives were received. The author's own opinion in both cases coincides with that of the majority, and he believes that the appendix should always be examined and its condition noted whenever the abdominal cavity is opened for any reason, provided no additional risk is involved. The fact that the appendix is normal in appearance does not prove that it contains no fecal concretions, and their presence is sufficient reason for the removal of an apparently healthy appendix. After removal of the right ovary the stump should always be covered with peritoneum, in order to prevent the risk of adhesion to the appendix. A long and free appendix should invariably be removed.

Silver Catgut.—A new method of effectually sterilizing catgut is given by L. GRUNFELD (Cblatt ges. Ther., Oct., 1902). The crude gut is first thoroughly cleansed with tincture of green soap and the brush, and then kept for 24 hours in the tincture. Then this is removed by washing with 90 per cent. alcohol and the catgut placed in a one-per-cent. solution of actol in water for seven to eight days in a blue or brown bottle. At the expiration of this time the catgut is placed into colorless bottles and exposed to direct sunlight, whereby the metallic silver is deposited on the fibers. It is kept until used in absolute alcohol containing 10 per cent. glycerin. Itrol may be used in place of actol with the

same result. Bacteriological examination showed that the gut was absolutely germ-free. Further advantages were great strength—since high temperatures were not used in preparing—and considerable pliability.

Prolapse of Rectum.—For a prolapse of moderate degree the following method of operation, which is comparatively free from danger and radical in its results, is recommended by J. M. MATHEWS (N. Y. Med. Jour., Oct. 18, 1902). The rectum is irrigated several times before the operation with boric-acid solution, one ounce to the gallon. After the patient is anesthetized the gut is drawn out to the full extent of the prolapse and held firmly by forceps. An incision is made at the anal portion of the prolapse completely around the rectum, and a careful dissection is then made of the mucous membrane and submucous tissue extending to the terminal end of the prolapse. This cuff is then cut off with a strong pair of scissors and the edges sutured with catgut. The hemorrhage is so slight that it may be controlled by hot sponges. The results are apparently very satisfactory.

THERAPEUTICS.

Physiological Action of Alcohol.—That alcohol is not a stimulant, but a decided depressant upon circulation, is the result obtained by J. SWIENTOCHOWSKI (Zeitsch. klin. Med., Vol. 46, Nos. 1 to 4). In this respect it does not differ in its effects upon other organs, for the apparent cerebral irritation is only a sign of beginning paralysis of the psychomotor centers which exerted inhibition. So also the increased physical activity and tendency to overcome fatigue results from gradual dulling of the muscular sense. In the stomach the digestive secretion may be first increased, but soon ceases almost entirely. The fact that animals inoculated with the germ of tetanus possess less resistance if alcohol is administered proves a deleterious influence upon general metabolisms. The ethereal ingredients of the better alcohols are no less harmful, since an expensive cognac was found to depress as much as a far cheaper grade. These observations will tend to considerably narrow the sphere of usefulness of alcohol in disease, especially as heart stimulant.

Physiological Action of Iron.—From a number of experiments on man and animals, H. LANDAU (Zeitsch. klin. Med., Vol. 46, Nos. 1 to 4) concludes: (1) That inorganic salts of iron are absorbed in the intestinal tract and exclusively in the duodenum directly into the lymph or blood-stream through the agency of the epithelial cells, the absolute amount thus absorbed being very small; (2) that the absorbed iron is deposited chiefly in the spleen, and partly in the liver and bone-marrow, in the two organs last named probably in organic combinations which do not always permit of its detection, while only the iron which is freed owing to the extensive disintegration of red cells following anemia, starvation, etc., is stored in the liver in a loose combination; (3) that the excretion of iron occurs in the cecum, colon and rectum, and to a much less extent by means of the epithelial cells of the convoluted tubules of the kidneys; (4) that the addition of inorganic ferric salts to the food of rabbits increases to a high degree the iron in liver and spleen; (5) that the addition of inorganic ferric salts to artificial iron-free food increases considerably the amount of iron in the body, though it does not come up to the amount of normally fed animals, a favorable influence upon the general condition also being noted; (6) that the efficiency of inorganic preparations in anemia is not to be sought in irritation of the hematopoietic organs, but probably in a direct action by yielding the iron necessary for the building up of new red cells.

The Glycerophosphates.—The first report that was made upon the use of these drugs in medicine was presented in 1854 by Dr. A. Robin of Paris, who had even then employed them for at least six years, and who spoke most highly of their efficacy. They are products of the action of glycerophosphoric acid upon various bases, such as sodium, potassium, iron, calcium, lithium, etc. The glycerophosphoric acid is obtained from the action of phosphoric acid upon glycerine, and is also a product formed in the human body during digestion. The sodium and potassium salts are very hygroscopic and are sold only in a 75 per cent. watery solution. They are saline in taste, jelly-like in appearance, and affected by changes in temperature. P. W. STREET (Med. Rec., Oct. 11, 1902) has made a careful study of the therapeutic value of these salts and believes that they have a very constant effect in promoting the nutrition of the cells. They supply phosphorus to the tissues in an easily assimilable form, as organic phosphorus, and since phosphorus is an important constituent of those cells which comprise the brain and nerve substance their utility as a nerve-food or tonic is naturally suggested. They are indicated and are most useful in all cases of nervous impairment due to overwork or excesses of any kind, and also in asthenic nervous maladies, mental depression, and whenever it is desirable to increase the nutrition of the cells. They greatly relieve hysteria, and are useful in chronic neuralgia and sciatica. They are contra-indicated in albuminuria, acute gout or rheumatism, and are incompatible with lead salts or carbonates. When taken by the mouth they are easily tolerated by the most delicate stomach and seem to have no immediate effect, but soon the appetite increases, the liver is stimulated, and the phosphate waste restrained. The glycerophosphate of sodium is most used and may be taken either in sirup of orange or sarsaparilla in doses of 10 to 30 grains. A useful formula is:

℞ Glycerophosph. Sod.....gr. vijss
Glycerophosph. Quininæ.....gr. j
Glycerophosph. Ferri.....gr. ij
Glycerini.....ʒj
Citric Acid q.s. (to complete solubility).
M. et Sig. To be taken in water before meals.

It is usually necessary to continue their use for from three to six months. If an immediate result is desired they may be used hypodermatically, but the discomfort from such use is frequently very great. The solution usually employed for this purpose is:

℞ Glycerophosph. Sod.....gr. xij
Sodii Chloridi.....gr. ss
Aquæ Distillatæ.....ʒi
M. et Sig. M xv injected once daily.

Pulmonary Tuberculosis.—

℞ Iodoform.....2.0-4.0 (ʒss-j)
Creosot.
Ol. eucalypti.
Ol. terebinth.
Tinct. guaiac.....aa 50.0 (ʒxiii)
To be administered internally and externally in capsules, by inhalation, and by diffusion into the patient's room.

—PETRESCO in *Le Progrès Médical.*

The following prescription is beneficial in nasal cases dependent on hyperemic hypertrophy of the turbinated bones, also in nasal polypus after operation, as a preventive of sneezing, and as allaying many of the symptoms in hay asthma:

℞ Cocainæ hydrochlor.....0.3 (gr. v)
Ol. eucalypti.....1.3 to 4.0 (ℳxxi-ʒi)
Vaselin vel lanolin ad.....30.0 (ʒi)
Misce.

—LENNOX BROWNE in *"Diseases of the Throat and Nose."*

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

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No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK.

SATURDAY, NOVEMBER 8, 1902.

THE PLAGUE WILL NOT DOWN.

THE politicians who run the San Francisco Board of Health are justly in disgrace. The national conference of the State Boards of Health held this last week in New Haven takes up the subject, treated over two years ago in our columns, and brings in a striking indictment of their negligence and indifference to the Federal Government; and it is reported that the Marine Hospital Service will take decided steps.

The issue of the matter is too grave to be passed over lightly; for what has been a scandal may at any moment become a tragedy. San Francisco has deliberately and with the connivance of the Mayor of that city and the Governor of California tried to suppress the fact that bubonic plague has been present in the city for two years. San Francisco is practically the only city in the United States that has ever had a case of bubonic plague, and all infection must come from there. The disease has broken out of Chinatown, the only locality where the health authorities would ever admit even its existence, and has spread to other parts of the city, and to the suburbs. Over thirty deaths have been reported in the past seven months; and either every case has been fatal, which augurs ill for the victims if the disease spreads, or else none but deaths too marked to be ignored have been reported, for the number of cases tallies exactly with the number of deaths.

If this be the case the people of San Francisco cannot feel any great sense of security in this means of protection. Certainly the rest of the country feels anything but secure; especially as it is known that there has been a distinct clash between the Treasury Department and the State authorities. The former declared that the situation must be recognized and faced, the latter that the State was competent to judge, and would deal with the trouble after its own manner. For fear of injuring business interests San Franciscans have denied the existence of plague, the newspapers have been silent, and the Board of Health reports have treated the matter as lightly as possible.

This short-sighted policy may act as a boomerang upon San Francisco, the moment a case breaks out anywhere else, that can be traced back to the city, for the railroads, all exports, and all travelers will be placed under quarantine. The knowledge of laxness will only serve to make people doubly cautious; and the only safety for San Francisco's commerce now is to enforce the strictest regulations concerning quarantine, and to satisfy other citizens as well as her own too credulous citizens that no case can exist without being reported, isolated and properly cared for.

Nothing but the strictest quarantine of the port saved New York and the eastern sea-board two years ago, when the plague reached Glasgow; and nothing but the same strict quarantine will save San Francisco, and in turn the whole of the United States.

PROFESSOR LORENZ AND AMERICAN SURGERY.

APROPOS of the visit of Prof. Lorenz to this country, there seems to be a tendency on the part of some ill-disposed persons to make disparaging remarks as to the real efficiency of the American surgeon. "If it is true," they say, "that surgical science has advanced to that point of excellence where the United States can hold its own with any country in the world, why is it that a foreign doctor, hitherto unknown to a majority of our people, should be hailed with such acclamation? Furthermore, why do hundreds of so-called authorities besiege the operating-room to learn just how the thing is done?"

The New York Times in commenting upon the fact has this to say: "Until one studies the episode carefully it is distinctly humiliating to our national pride, but it ceases to be so when better

understood, and, not only that, but it presents the whole medical profession in a most admirable light. Our own surgeons have made so many discoveries themselves, have developed so many brilliant and courageous methods of dealing with disease, that they can well afford to accept instruction from the specialists from other lands who are fortunate enough to be able to repay in part or whole their debt to American science. And as the position of our surgeons while learning of a foreigner is without humiliation, so that of Prof. Lorenz in performing his wonders is without a trace of condescension or of commercialism."

This view of the matter is admirable and wholly sane. Prof. Lorenz did not come to this country to show us how to operate upon deformities of the hip, however willing some of us might be to have him do so. He came at the earnest solicitation of a multimillionaire, who has perfect liberty to call in whomsoever he pleases. He came to operate on the wealthy man's little daughter, unmindful of what anyone may surmise with respect to his opinion of the surgeons and surgery of America. And in accepting this invitation Prof. Lorenz has shown much the same spirit that has prompted great literary men, such as Thackeray and Matthew Arnold and Mr. Kipling, to visit us; namely, a desire to exchange opinions on matters of vital interest to humanity.

There is no need for an apology on either side. The learned Viennese Professor will doubtless take away as many pleasant impressions of our real progress as he is likely to leave behind hints valuable to the present and coming generations of American surgeons.

MEDICAL INDICATIONS FOR THE INTERRUPTION OF PREGNANCY.

IT is the common practice of teachers of obstetrics to emphasize the doctrine that the preservation of the mother is the supreme law of obstetrics. The enforcement of this law may involve the destruction of the fetus, but this is not to deter the physician from the performance of his duty, which is, first and last, to preserve the maternal life as the more important human unit. In its essence this teaching is intended to be, and in reality is, conservative. But its proper application demands a degree of prognostic judgment which the beginner in medicine does not possess. He therefore turns for guidance to obstetrical literature, where he readily finds such an extensive list of medical indications for the interruption of pregnancy that a too precipitate resort to extreme measures is often the result.

This subject is one of a number of very practical matters which were discussed at the fourth international congress of gynecologists and obstetricians, held a few weeks ago at Rome. After consulting an ordinary text-book of obstetrics for a list of the maternal conditions, particularly the systemic diseases, which indicate the induction of premature labor, one is somewhat surprised to find that Professor Draghiesco of Bucharest, in a total of 18,132 accouchements, found medical indications for early interference in only 17 cases, of which 13 were cases of eclampsia, three were grave cardiac disorders, and one was epilepsy. Again, Professor Rein of St. Petersburg, in a series of nearly 3,000 cases, found indications for premature delivery in 37 instances; but about three-fourths of these were cases of deformed pelvis, and in the few instances of systemic disease in the mother one finds an enumeration only of nephritis, eclampsia and heart disease.

We do not mean to suggest that serious cardiac insufficiency, eclampsia and the graver forms of albuminuria are to be regarded as the sole indications for the performance of the operation under discussion, but it certainly is worth while to contrast these statistical reports, derived from well-managed clinics having an immense and representative service, with such an academical treatment of the subject as was presented at the same congress by Dr. Schauta of Vienna. The latter includes among the important medical indications polyneuritis, chorea, tetany, cerebral tumor, hemiplegia, psychoses, epilepsy, pityriasis versicolor, prurigo, eczema, pemphigus, herpes gestationis, progressive tuberculosis, ptyalism, hematemesis, catarrhal appendicitis, grave icterus, hepatic tumors, pyelonephritis, hyperemesis, persistent albuminuria, amaurosis and retinitis, eclampsia, uncompensated valvular lesions, cachexia, pernicious anemia, beginning typhoid fever or dysentery, etc. The advisability of interfering with gestation in some of these conditions is at least doubtful; but we desire here especially to show that in actual practice the necessity for interrupting pregnancy in the interest of the maternal life is not nearly so frequent as this interminable list of "indications" would imply.

The anxious medical student, depressed with the weight of his future responsibilities in this matter, may console himself with the knowledge that he will not be called upon for this supreme

decision so frequently as he may have imagined. But he will not escape the responsibility altogether, and we have no sympathy with the attempt to relieve the individual practitioner of this responsibility by the promulgation of rules by an international congress. Such a congress might confine itself to an expression of belief in the supreme claims of the maternal organism, in which case its pronouncement would be merely useless. On the other hand, an enumeration of indications for the interruption of pregnancy might be risked. In this case the congress would either be too liberal in its inclusions and thus mislead the inexperienced and open the door to traducers of the profession, or it would be so conservative as to leave the individual practitioner without the support of authority in the very cases in which such support is most needed. The ultimate court of appeal is and must remain the physician's own science and conscience. Mediacl men can best serve each other and themselves by a frank discussion of the ethics of practice, by a reverent regard for *all* human life, and by carefully recording and freely publishing the results of their experience.

ECHOES AND NEWS.

NEW YORK.

Appointment of Dr. Bailey.—Dr. Pearce Bailey has been appointed Consulting Neurologist to Roosevelt Hospital.

Academy of Medicine.—The Section on Pediatrics will hold a meeting Thursday, Nov. 13. Dr. S. O. Goldan will report a Case of Meningitis treated by Lumbar Puncture; Dr. C. Herrman a Case of Achondroplasia. Dr. G. C. Swift will read a paper on Adherent Pericardium and Dr. Henry Heiman a paper on Peliosis Rheumatica in Children. The Section on Surgery will meet Monday, Nov. 10. Dr. Charles R. L. Putnam will present a Case of Gonorrheal Peritonitis; Dr. A. V. Moschcowitz will read a paper on Inguino-Superficial Hernia. Dr. F. Griffith will present some new tapping instruments. The Section on Otology will meet Nov. 13, Drs. M. Toeplitz, T. P. Berens and A. B. Duel will present specimens and cases. Dr. Thomas R. Pooley will read a paper on Affections of the Labyrinth Resulting from General and Organic Diseases. The following were made Resident Fellows: Drs. Thomas Armstrong King and Charles Wood McMurtry.

Bellevue Changes.—Dr. George Taylor Stewart has been placed in charge of the hospitals outside of Bellevue, and his deputy, Michael J. Richard, is conducting Bellevue's affairs. This change was made because Dr. Stewart had too much work to do. He was responsible for all hospitals up to four weeks ago when the change went into effect.

New Hospital Buildings for the City.—Plans have been filed with the Department of Buildings for the erection of two one-story frame hospital buildings on North Brother Island, off East One Hundred and Thirty-ninth street. The buildings will occupy a site 26x98, and will be known as the Riverside Hospital. They will be used for contagious-disease patients. Each building will cost $9,500.

Medical Research Lectureship.—At the monthly meeting of the board of trustees of the Johns Hopkins University held Nov. 3, the trustees received and accepted the offer of Dr. and Mrs. Christian A. Herter of New York city to give $25,000 for the foundation of a memorial lectureship in the medical department, "designed to promote a more intimate knowledge of the researches of foreign investigators in the realm of medical science." This end is to be secured by inviting each year some eminent worker in physiology or pathology to deliver one or more lectures at the Johns Hopkins University upon a subject with which he has been identified. The lecturer will receive as an honorarium the annual income of the endowment. The committee to select the lecturer will consist of Dr. Welch, Dr. Osler and Dr. Abel, subsequent vacancies in this committee being filled by choice of the remaining members in such a way that pathology, physiological chemistry and clinical medicine shall continue to be represented. There is no bar to opening the proposed lectureship to leaders in medical research in this country, if this should ultimately appear desirable.

X-ray Suit Unsuccessful.—A suit of interest to physicians has just been decided by Justice O'Gorman in the Supreme Court who dismissed the damage suit of Miss Josephine MacDonald against Nelson T. Shields and G. F. Jernigan, dentists, and M. J. O'Connor, X-ray specialist, without letting it go to the jury. She sued to recover $50,000 for damages she alleged she sustained through an X-ray examination made on her by O'Connor, under the supervision of the other two defendants, whom she had consulted as dentists, in regard to the condition of her teeth. She was severely burned by the rays, and her hair fell out, leaving her bald. Justice O'Gorman decides that Shields had nothing to do with the operation, which was completely under the supervision of O'Connor, and that he cannot be held liable because the plaintiff had voluntarily submitted to the examination. As to Jernigan, Justice O'Gorman held that he was merely an assistant to Shields and was not liable either. Moreover as O'Connor had not been served with any summons or complaint in the action no case could be made out against him. Miss MacDonald asserted that she had not gone voluntarily to O'Connor's office, but had been taken there by Shields and Jernigan without being told what the purpose of the visit was. Justice O'Gorman held that the preponderance of the evidence showed that she had consented to the operation. Miss MacDonald's counsel announced that an appeal would immediately be taken.

Preventive Medicine Awards.—The two prizes of a thousand dollars and five hundred dollars offered by The Maltine Company last January for the two best essays on "Preventive Medicine" have been awarded by the judges, Dr. Lewis of New York, Dr. Reed of Cincinnati and Dr. Rhodes of Chicago, who met for a final consultation in Buffalo. Two hundred and nine essays were submitted in competition, and although nearly every State in the Union was represented in the contest, both prizes were won by Philadelphia men. The thousand dollar prize was awarded to Dr. W. Wayne Babcock, 3302 North Broad street, Philadelphia. His essay is entitled "The General Principles of Preventive Medicine" and was submitted under the nom-de-plume "Alexine." The five hundred dollar prize was awarded to Dr. Lewis S. Somers, 3554 North Broad street, Philadelphia. His essay is entitled "The Medical Inspection of Schools—a Problem in Preventive Medicine" and was submitted under the nom-de-plume

"Broad." The two successful essays will first be published in representative medical journals, and then in permanent form for gratuitous distribution to the profession at large. The following will undoubtedly prove of interest to the general profession. It shows how the various sections of the country were represented in the competition: Alaska, 1; Arkansas, 1; California, 6; Colorado, 4; Connecticut, 5; District of Columbia, 3; Florida, 5; Georgia, 5; Illinois, 15; Indiana, 11; Iowa, 8; Kansas, 2; Kentucky, 3; Louisiana, 2; Maine, 4; Maryland, 2; Massachusetts, 12; Michigan, 7; Minnesota, 7; Mississippi, 1; Missouri, 5; Montana, 2; Nebraska, 2; New Hampshire, 1; New Jersey, 4; New York, 22; North Carolina, 1; Ohio, 11; Oregon, 1; Pennsylvania, 25; Rhode Island, 1; South Carolina, 2; Tennessee, 1; Texas, 2; Vermont, 1; Virginia, 1; Washington, 3; West Virginia, 2; Wisconsin, 10; Ontario, 2; New Brunswick, 1; Unidentified, 5. Total, 209.

College of Physicians and Surgeons.—The following lectures on scientific subjects of interest to students and teachers of medicine, will be given by officers of Columbia University. On successive Wednesdays at five o'clock in the Lower Lecture Hall, College of Physicians and Surgeons, entrance at 437 West Fifty-ninth street. Officers, alumni, and students of the College of Physicians and Surgeons are invited to attend these lectures. Admission is without ticket up to the limit of the Lecture Hall.

Nov. 5. Franz Boas, Ph.D., Professor of Anthropology, Growth of Children (illustrated); Nov. 12, Edward Lee Thorndike, PhD., Adjunct Professor of Genetic Psychology in Teachers' College, The Inheritance of Mental Traits; Nov. 19. Amadeus W. Grabau, S.D., Adjunct Professor of Paleontology, Illustrations of the law of Tachygenesis, or "acceleration in development" (illustrated); Nov. 26. Bashford Dean, Ph.D., Adjunct Professor of Zoology, The beginnings of certain characteristic structures of man; Dec. 3. Edmund B. Wilson, Ph.D., LL.D., Professor of Zoology, The Phenomena of Cell Division in Relation to Some Problems of Biology and Medicine (illustrated); Dec. 10. Lucien Marcus Underwood, Ph.D., Professor of Botany, The Relation of Botany to Materia Medica; Dec. 17. Livingston Farrand, A.M., M.D., Adjunct Professor of Psychology, Nervous and Mental Diseases Among Savage Races; Jan. 7. J. Livingston Rutgers Morgan, Ph.D., Adjunct Professor of Physical Chemistry, Osmotic Pressure and Ionization (illustrated); Jan. 14. Edmund Howd Miller, Ph.D., Adjunct Professor of Analytical Chemistry, Some Analytical Applications of Ionization; Jan. 21. Marston Taylor Bogert, A.B., Ph.B., Adjunct Professor of Organic Chemistry, Synthetic Organic Medicaments; Jan. 28. James McKeen Cattell, Ph.D., Professor of Psychology, Physical and Mental Fatigue; Feb. 4. James Furman Kemp, A.B., E.M., Professor of Geology, Geological Factors in Problems of Water Supply (illustrated); Feb. 11. Richard Elwood Dodge, A.M., Professor of Geography in Teachers' College, The Weather Phenomena of the Eastern United States in Their Relation to Bodily Health (illustrated); Feb. 18. Gary N. Calkins, Ph.D., Instructor in Zoology, The Protozoa in Relation to Modern Problems in Biology; Feb. 25. Henry Fairfield Osborn, ScD., LL.D., Da Costa Professor of Zoology, Methods of Exploration for Fossil Mammals and Reptiles in the Rocky Mountain Region (illustrated); Mar. 4. Frank Leo Tufts, Ph.D., Tutor in Physics, Some Recent Researches on the Relation of Electricity to Matter (illustrated); Mar. 11. William Hallock, Ph.D., Professor of Physics, Some Phenomena of the Molecular Mechanics of Liquids (illustrated); Mar. 18. Franklin Henry Giddings, Ph.D., LL.D., Professor of Sociology, Vital Statistics (illustrated); Mar. 25. Henry E. Crampton, Ph.D., Adjunct Professor of Zoology, The Problems and Results of Experimental Embryology (illustrated); Apr. 1. Alexander P. Anderson, Ph.D., formerly Curator of the Herbarium, Starch, its Properties and Uses (illustrated).

The New Babies' Hospital.—The new building of the Babies' Hospital of the City of New York, on the northeast corner of Lexington avenue and Fifty-fifth street, which was begun in August, 1901, is now completed, and the institution is moving in. The first, or entrance floor, is divided into two parts, the western half, entered from Lexington avenue, being devoted to the dispensary. From a large waiting room open a general medical room, a room for the chief physician, and a small isolation room, where suspicious cases may be examined. There is also a small surgery. The eastern half of the building, entered by the main doorway on Fifty-fifth street, contains the secretary's office, a clinic seating forty students, an ante-room, a room for the Clothing Committee, etc. The pathological laboratory of the hospital has been largely used for research as well as in routine work. This year an appropriation of $700 has been made by the Rockefeller Institute for Medical Research to maintain a worker in the laboratory for the ensuing year.

PHILADELPHIA.

Changes in Number of Contagious Diseases.—During the week ending November 1 there were reported 107 cases of typhoid fever, an increase of 17. No new cases of smallpox were reported. The entire number of deaths was 339, a decrease of 77 from the previous week.

Medico-Legal Society Banquet.—The Medico-Legal Society of this city celebrated its Twenty-fifth Anniversary, Oct. 28, with a banquet. The society has for members the representatives of both medicine and law. The toasts and those who responded to them were: "The Medical Profession," Dr. Thomas H. Fenton, President of the County Medical Society; "The Legal Profession," John W. Umstead, of the local Bar; "Sister Societies," Dr. William M. Welch, President of the State Medical Society. The branches of the county association were answered for thus: "North Branch," Dr. Albert H. Eaton; "South Branch," Dr. James B. Turner; "Northwest Branch," Dr. Wendell Reber. Dr. David Riesman spoke for the Northern Medical Association.

Myasthenia Gravis.—At the October meeting of the Philadelphia Neurological Society, considerable discussion was had on the above topic. Dr. A. A. Eshner reported a case in detail, the patient being a woman of 39. Associated with the myasthenia gravis in this case was angioneurotic edema, an association of diseases which Dr. Eshner has not found noted in the literature. He believes there is need of an entire re-examination as to the pathogenesis of myasthenia gravis. The theory of a vasomotor lesion seems inviting to him. Probably both manifestations in the case reported were due to the same underlying condition.

Symptoms of Myasthenia Gravis After Repeated Electric Shocks.—Dr. C. K. Morton detailed this case. The patient was a man of thirty years whose work as a lineman necessitated his receiving from 20 to 600 times daily a current generated by from four to six dry cells. There was no history of previous illness for the past eighteen years, no syphilitic history, no alcoholism. Weakness in the hands, arms and legs was noticed, with difficulty in swallowing. At the end of the second day he was unable to walk, at the end of the third day he could not lift his head or turn himself. Tendon reflexes were gone. Sensation was normal. The patient soon

afterward began to improve and at the end of the twenty-second day is much better. One point is that the rapid exhaustion of myasthenia gravis was not noted at the end of an examination which lasted for more than an hour. Treatment consisted in absolute rest, light diet, calomel, potassium iodide 60 grains three times daily, and tonics.

Bulbar Paralysis Simulating Myasthenia Gravis.—This case was reported by Dr. C. K. Mills. The patient developed a symptom-complex resembling myasthenia gravis two days after receiving an electric shock from a current of 1,300 volts. The disability began as difficulty in expectoration, articulation, and swallowing. About five months afterward the man was in a trolley accident and later developed weakness of the extremities which he attributed to the accident. This is not thought to be the case, all the symptoms being due to electric shock.

Perforation of Intestine Probably Due to Traumatism.—Dr. G. G. Ross reported this case at the Philadelphia Academy of Surgery Nov. 3. The patient was a man who was struck on the abdomen by a box. This was soon followed by pain, nausea, vomiting, and shock. Operation was performed within six hours. The abdomen was found to contain some fluid which was removed by thorough flushing of the cavity. The intestine was then examined and a perforation found 12 inches from the cecum. The mucous membrane protruded through the opening in the other coats. The opening was closed and the patient made a satisfactory recovery.

Marjolin's Ulcer.—Dr. J. Chalmers Da Costa, in a paper on the above subject, cited two instances of ulcer of the leg which developed into carcinoma and discussed the relationship of the two conditions. The theory of irritation as a cause of cancer was mentioned. Though this seems to be supported by clinical findings it must not be forgotten that there is excessive production of tissue in both innocent and malignant epithelial growths and that a malignant growth following irritation does not prove that the irritation was the cause. No theory of causation explains all the phenomena of cancer. The differential diagnosis between chronic ulcer and a malignant growth involving it was considered in detail by Dr. Da Costa, who emphasized the importance of thoroughly examining every chronic ulcer before a diagnosis is made. Every doubtful case should be studied by a skilled pathologist. But even this tribunal is not infallible as evidenced by the fact that a growth of the tongue and also one of the leg were pronounced carcinoma by pathologists but promptly healed when the patients were given mercury and the iodides. A point to remember is that the mere presence of atypical epithelium does not prove it to be a carcinoma. Their unrestrained reproduction is necessary, as is their involvement of sound tissue surrounding the growth. A number of sections which include the growth and a portion of the apparently sound tissue surrounding it should be studied. If that sound tissue shows no infiltration of epithelial cells, the diagnosis of cancer should be rejected. The same should hold in examining the tongue—remove a portion of the surrounding tissue, as well as some of the growth, for microscopic study.

Obituary.—Dr. Daniel E. Hughes, chief resident physician of the Philadelphia Hospital since 1890 died in that institution Oct. 28 aged fifty-two years. Dr. Hughes graduated from Jefferson Medical College in 1878. He practised for a time in Williamsport and then returned to this city to accept the position he held until his death. Dr. Hughes made a special study of the insane and became an alienist of acknowledged authority. He was also a practical therapeutist of exceptional ability. His "Practice of Medicine" has run through a number of editions. He was one of the founders of the secret order known as the "Mystic Shrine." Contributions to a fund for the erection of a tablet in the Philadelphia Hospital to the memory of Dr. Hughes are being made.

CHICAGO.

How to Care for the Sick and Injured at a Big Fire.—Seventy firemen of the downtown district in the clinic room of the Harvey Medical College were recently given a free illustrated lecture on this subject. Dr. Henry W. Gentles, who was in charge of the ambulance corps at the World's Fair, was the speaker. The meeting was the first of a series that will be given for the benefit of firemen. Each week a different topic will be discussed.

Benefit for Hospital.—The Citizens' Aid Association has arranged an attractive program for a concert to be given Nov. 12, for the benefit of the Alexian Brothers' Hospital.

Cost of Illinois Hospitals.—For three months, ended Sept. 30, the State Board of Charities reports that the receipts of the fifteen institutions under its jurisdiction, including cash on hand July 1, were $744,176.52, and expenses $553,376.15. The outstanding indebtedness was $76,134.97. To meet this, the institutions had $268,131.54, on hand, or subject to call, making the net surplus at the end of the quarter $191,998.57. The net per capita cost at all institutions was as follows: Elgin Insane Hospital, $37.48; Kankakee Insane Hospital, $34.31; Jacksonville Insane Hospital, $31.40; Anna Insane Hospital, $35.92; Watertown Insane Hospital, $33.13; Peoria Insane Hospital, $35.14; Asylum for Insane Criminals, $60.70; Deaf and Dumb Asylum, $30.34; Blind Asylum, $50.06; Feeble-Minded Asylum, $37.31; Soldiers' and Sailors' Home, $33.16; Soldiers' Orphans' Home, $44.13; Soldiers' Widows' Home, $58.49; Eye and Ear Infirmary, $56.22; State Training School for Girls, $44.17.

Sanitary Inspection of Public Schools.—The reputation of Jacob A. Riis as a sociologist is well-known. He has expressed surprise at the defective plumbing which was shown to exist in many of the Chicago schools, and he has called attention to the menace which this condition presents to the health of the entire city, and he describes the satisfactory results already obtained through the New York system of medical inspection. Only the most competent physicians are employed under the latter system, and they have absolute control of the sanitation of the public school buildings. These inspectors have not only prevented the spread of contagious diseases by vigilant examinations of children, but they have stamped out such ailments as ophthalmia, or granular eyelids, which science has demonstrated is spread by contagion. It will be remembered, that a good start was made in the direction of an adequate system of medical inspection in the schools of Chicago when Dr. Christopher secured the appointment of medical examiners to prevent the spread of contagious diseases. But the scope of their inspection should be extended to sanitation, and everything that pertains to the health of the pupils, and the force should be enlarged.

Consumption Hospital.—Public attention has just been called to the seriousness of the problem of tuberculosis in Chicago by the refusal of hospitals, it is said, save the County institution at Dunning, to receive consumptive patients. It is folly to criticize these institutions for their unwillingness to expose their patients to the infection of pulmonary tuberculosis. The hospitals were not built or designed for the isolation or proper treatment of consumption, and if consumptive patients were admitted to any one of them, all the other

patients would have to be transferred to other institutions. The problem of segregating consumptives and checking the spread of the disease is much more serious than that presented by any other communicable disease, for the reason that persons afflicted with it may engage in business and social activities for months or years before succumbing to its ravages. It is estimated that there are about six thousand people afflicted with the malady in Chicago. If these could be segregated in a sanitarium and put under proper treatment, the most of them could be cured and the rest of the population saved from infection. Few of them can afford to go away to the sanatoria that have the advantage of favorable climatic conditions and environment. What is needed is a city hospital and sanitarium for the isolation and treatment of consumptives who are unable to leave home. The State should also follow the lead of New York and Massachusetts in establishing a great State institution for the treatment of consumption.

Drinking Fountains for Public Schools.—At a recent meeting of the City School Board, Dr. Kuflewski offered a resolution to the effect that the business manager be instructed to prepare and submit to the board a plan for a drinking fountain to be used in all the public schools that will provide a method of taking water without placing the lips to any vessel. Such plan to include a constant stream of water in such quantities as will assure sufficient amount for drinking and cleansing purposes. The report of the sub-committee appointed to investigate the school drinking water supply and recommend means of obtaining pure water informed the trustees that at present nothing better could be suggested than to continue to shut off the water supply. Professors Long, of the Northwestern University Medical School, and Jordan, of the University of Chicago, who had made chemical and microscopical examinations of the water, told the sub-committee that sterilizing would be palliative, but not remedial.

Appointment of Dr. Schmidt.—Dr. Louis E. Schmidt has been appointed clinical professor of genito-urinary surgery at the Northwestern University Medical School.

Chicago Pasteur Institute.—Since the opening of this institute in July, 1900, 1,538 patients have been treated, 745 of whom came from Illinois, 166 from Ohio, and 112 from Iowa. One thousand three hundred and eighty-two were bitten by rabid dogs, 9 by hydrophobic human beings, and the remainder by various animals. The deaths reported are 7, a mortality of 0.45 per cent.

Higher Standard for Nurses.—The physicians of Chicago are urging the establishment of a higher standard for trained nurses, so as to prevent the graduating of inexperienced young women. In this city several institutions now issue diplomas to students after four or six months' study. Two of them are merely correspondent schools, and are instructing nurses in all parts of the Middle West.

Recovery of Professor Matthews.—Professor Albert P. Matthews of the Department of Physiological Chemistry of the University of Chicago is recovering from an attack of appendicitis.

CANADA.

Montreal's Health Good.—For this time of the year, Dr. LaBerge, the Medical Health Officer of Montreal, reports that the health of that city is extremely good. There is only one case of smallpox in the civic hospital, and that a very mild one. The death rate last week was down to 102.

New Sewage Disposal System for Toronto.—For more than twelve years the City Council of Toronto has had before it the question of providing a more extended and improved system of sewage disposal. At last it has decided upon one definite step, and that is to submit to the ratepayers at the municipal elections in January the entire question and let them decide whether the work shall proceed at once or not. Dr. Sheard, the Medical Health Officer, has made strong recommendations in favor of septic tanks and filtration on a sewage farm, the initial cost of which will be in the neighborhood of $2,385,000. The cost of maintenance of this system will, it is estimated, be $76,000 annually.

Toronto Western Hospital.—The reports submitted at the recent annual meeting of the Board of Governors of this institution, show that the hospital is in a very flourishing condition. During the past five years, the Western Hospital has made great headway, and has increased its work fourfold. In that time it has accumulated a surplus of $13,000; and it is the intention of the Governors at an early date to erect a large modern wing for the accommodation of 100 patients. The following medical men were elected on the Board of Governors: Drs. A. A. Macdonald, Price Brown, J. W. McCullough, J. B. Gullen, John Ferguson and G. H. Carveth. An addition to the visiting staff to the extent of nine practitioners was made.

Training Asylum Attendants.—The Ontario Government has decided to adopt the plan of training the attendants in the various asylums of the Province. The new course will provide for instruction of the attendants similar to that received by hospital nurses. Attendants entering on the course will be required to remain at the institutions at least two years, receiving lectures and training, after which time they will be granted a diploma.

New Professor of Hygiene at McGill.—The Medical Deparment of the University of McGill has decided to recommend to the Board of Governors the name of Dr. T. H. Starkey, of the University College Hospital, London, England, for the position of Professor of Hygiene, a chair which was rendered vacant through the death of Dr. Wyatt Johnston. Dr. Starkey is one of the leading hygienists of England, and before entering on his present appointment at University College Hospital, had secured much valuable training in sanitation and hygiene in India.

Immigration Medical Officer Appointed.—In view of the large increase of immigration into Canada, the Dominion Government has appointed Dr. Leonard Ellis of St. Johns, N. B., medical officer to be attached to the Canadian Immigration Bureau, with special authority to enquire into the health and circumstances of all immigrants arriving at Canadian ports from the British Isles and European countries. In addition he will examine all immigrants rejected by United States officials, who endeavor to enter the latter country by way of Canada. It is the intention of the Government to restrict immigration of paupers and those afflicted with dangerous diseases. An Act was passed at the last session of parliament empowering the Government to deport diseased immigrants and prevent their landing in Canada.

Indians with Smallpox Causing Trouble in the West.—Some little while back reports were sent out from Helena, Montana, to the effect that Canadian officials had sent into the United States, Canadian Indians suffering from smallpox. This seems to be incorrect; a case practically of the boot being on the other foot. It appears that a band of American Indians were in Canada on a sixty days' pass from the United States Belknap Agency, paying a friendly visit to some Canadian Indians. Smallpox developed among them; and the agent of the Blackfoot Reservation was asked to receive them. As they did not belong to his reservation, he refused. Then the Canadian authorities provided them with proper medical attendance and when judged

fit to be convoyed back to their homes again applied to the same agent to receive them. Refusal was again made, so they were despatched by themselves, and were consequently turned back into Canada.

Protestant Hospital for the Insane, Quebec.—A large new wing has recently been opened in connection with this hospital. The growth in the population of this hospital has simply been remarkable, and points to an increase of insanity to an alarming extent in the Province of Quebec. The first patient when the institution was opened was received in July, 1890. By the end of that year there were in residence 139 public and private patients. At the end of 1901 this number had grown to 411; and at the present time, a few months over twelve years after it was established, the institution contains 225 men and 200 women patients. The new wing has accommodation for eighty more patients. Dr. T. J. W. Burgess is the Medical Superintendent, and he has as assistants Drs. J. V. Anglin and C. A. Porteous.

GENERAL.

Changes in the Medical Corps of the U. S. Navy.—Week ending Nov. 1, 1902. Passed Assistant Surgeon W. B. Grove, detached from the San Francisco and ordered to the Prairie, for duty with the marine battalion aboard that vessel. Assistant Surgeon A. Stuart, ordered to duty at the naval hospital, Navy Yard, New York, N. Y. Assistant Surgeon S. S. Rodman, detached from the Alert, and when discharged from treatment at the naval hospital, Mare Island, Cal., ordered home and granted sick leave for two months. Surgeon H. E. Ames, ordered to the Texas. Passed Assistant Surgeon J. E. Page, detached from recruiting duty and ordered to the Newark. Assistant Surgeon A. W. Balch, detached from the Monongahela and ordered to the Machias. Assistant Surgeon C. H. De Lancy, detached from the Buffalo and ordered to recruiting duty with Ensign D. C. Hanrahan at Knoxville, Tenn.

Measles Kills Thousands.—Thousands of natives of Herschel Island and along the Arctic coast are dying from measles. The news was brought by the whaling steamer Jeanette, which arrived last Sunday. Captain Newth said: "At least twenty-five per cent. of the natives along the Arctic coast have died from measles. They are dying off rapidly. The march of civilization has increased the death rate from Nome north. Two years ago the devastation began, and it has continued since. When the natives began to wear civilized man's clothing and drink whisky then began their decline. Diseases attacked them and, not knowing how to care for themselves, the people died rapidly. Pneumonia, rheumatism, grip and other maladies made their appearance and spread along the coast with appalling results."

Negro Cocaine Fiends.—It has been learned, writes the Sun, that cocaine as well as whisky was peddled by the whisky pirate ship Hazel, whose skipper, Capt. Hull, was recently arrested on the Mississippi River, charged with shooting the Sheriff and other citizens of Chicot County, Ark. In his defence, Hull explains that he did not introduce cocaine among the negroes of the Yazoo Delta, but merely did what a great many planters are doing—supplied the demand for it. The cocaine habit began among the negro roustabouts of New Orleans, who found that the drug enabled them to perform more easily the extraordinarily severe work of loading and unloading steamboats at which, perhaps for seventy hours at a stretch, they have to work, without sleep or rest, in rain, in cold and in heat. The pay is high, $150 a month, but the work is impossible without a stimulant. Whisky, while protecting the negro against the rain and cold, did not give him the endurance against fatigue that was needed. Cocaine proved to be the very stimulant needed. Under its influence the strength and vigor of the laborer is temporarily increased, and he becomes impervious to the extremes of heat and cold. But cocaine is filling the insane asylums with wrecks. From the roustabouts the cocaine habit spread to the levee camps along the Mississippi, where the work is hard, and the conditions of life and work unfavorable. Finally it reached the plantation hand and here it got the same foothold. While the work on the cotton plantation is not so hard as levee building or loading steamboats, still at the cotton picking season it calls for extraordinarily long hours. As there is never enough labor to pick all the cotton it is to the interest of the planters to have the negroes work as much extra time as possible. The planters therefore hold out every encouragement to the negro hands to put in a big day's work. The negroes found that the drug enabled them to work longer and make more money, and so they took to it. Its use has grown steadily. On many of the Yazoo plantations this year the negroes refused to work unless they could be assured that there was some place in the neighborhood where they could get cocaine, and one big planter is reported to keep the drug in stock among the plantation supplies and to issue regular rations of cocaine just as he was accustomed in the past to issue rations of whisky. Cocaine has not been in use on the river plantations long enough to do the harm it has done in New Orleans, but the problem is looming up as an important one. In the meanwhile the efforts to prevent the spread of the cocaine habit in New Orleans and other Southern cities have been quite successful. It has been found impossible to cure the cocaine fiends who are fast drifting to the insane asylums, killing themselves or being killed, but it has been found possible to stop the future sale of cocaine in the drugstores and to keep the younger negroes from taking up the habit. The negroes themselves have been very active in this movement, and the police have shown so much energy that the public sale of the drug has almost ceased in New Orleans. A crusade against the use of the drug has begun in most of the towns, but as yet no effort has been made to prevent its sale in the country districts.

Increase of Insanity in London.—According to the London Truth the annual report of the Asylums Committee of the London County Council shows that the increase of lunacy in London last year was greater than it has been in any year since 1896. On Jan. 1 last the number of London lunatics under the cognizance of the Asylums Committee had reached the total of 22,155. A new asylum was opened in March last for the accommodation of 2,000 patients, and already the committee has under consideration the necessity of proceeding with the construction of another building in order to provide for the estimated increase of 500 cases per annum. At this rate the burden of providing for over half a million lunatics will be imposed, by the end of the century, upon the unfortunate inhabitants of London who manage to retain their sanity. Among the causes of insanity in patients admitted hereditary predisposition is held accountable for 27 per cent. of the cases and alcoholic intemperance for 17 per cent. If it were possible, however, to investigate fully the family history of every patient, it is quite likely that alcohol might be proved to play an even more prominent part in the causation of insanity than these figures indicate. Bearing on this question, a most interesting history of a family of inebriates appeared recently in the Quarterly Journal of Inebriety, accompanied by a genealogical table for four generations. The first generation comprised a married couple of good social position, who apparently did nothing to forfeit their reputation. They

had two daughters, one of whom died a raving maniac at 40 after a life of the wildest excess. The second married and had eight children. Of this third generation, two males are drunkards and alive, five daughters died of phthisis, the sixth married and after bringing seventeen children into the world became a drunkard and opium-eater. Ten of these seventeen, comprising the fourth generation, have died from phthisis, one has drifted into a life of immorality, one suffers from phthisis, one died from an overdose of morphine taken when drunk, one committed suicide, and three suffer from suicidal mania in varying degrees.

Alcoholism and Insurance Risks.—According to the N. Y. Evening Post efforts are being made abroad to organize total abstainers into what is known as a "super-standard" class of life risks. The movement is the result of a careful investigation into the death losses of life companies, with the result that much valuable data has been accumulated to show that persons who do not use alcoholic beverages make altogether the best class of policy-holders for an insurance company to have. The subject has been studied before by actuaries in this country, and although authorities are not in agreement as to the exact effect of such indulgence, the feeling is general that it adds materially to the ordinary life risk. In cases where policy-holders have been attacked with a serious disease, it has been found that the chances of recovery decidedly favor those who do not use stimulants of any kind. One foreign expert cautions the companies against making any allowance for even moderate drinking. This, he says, may easily lead to excess. He adds: "The outlook for a man who should fall ill with pneumonia, typhoid fever, dysentery, nephritis, heart disease, diabetes, and affections of the liver is bad enough under the best circumstances, but if the patient is an intemperate man his hope for recovery is reduced very materially, and the fight for life is desperate, if not hopeless. Every physician who has had much emergency hospital practice, or even private practice, among the intemperate, can assent to these statements. It is known that men who follow hazardous occupations are frequently liable to injuries. In case the party injured is temperate his chances for recovery from the injuries and the surgery incident thereto are far in excess of the man who uses intoxicants. Since inheritance plays such a great rôle in life insurance, and many a risk personally good is rejected on account of bad ancestry, would it not be also well to consider, not only the physical features of a risk who has drunken ancestors, but also the moral features of such a risk in all its bearings? Namely, intemperance is usually frequent among the vicious and those of low habits, who frequent all kinds of resorts, the dive, the brothel, the levee—all places of great risk to health and life. The children of heavy drinkers are personally poorer risks than those whose ancestors led temperate and pure lives. Instances might be multiplied to show the many correlative combinations in which intemperance is a factor as a great hazard in life insurance. Under present conditions are considered two kinds of risks alone, the standard and so-called substandard. The first embraces all those who can pass a satisfactory examination and can get an unmodified policy at the usual rates; the second embraces all those who can pass only a partially successful examination, and can obtain a policy with some modifications and inserted conditions. This expert makes a plea for the establishment of another class of risk other than the two already existing, and which for want of another or better name he calls the super-standard class. This class shall possess all the good qualifications of the standard risk, namely, good family history, free from taint of disease, bad habits, longevity, personally good health, and in addition to all this they must be teetotalers. There are a sufficiently large number of these who take life insurance to justify the creating of such a class of super-standard risks, to whom policies should be issued at reduced rates. This is no more than just to them, as they should not be compelled to pay for the shortcomings of that large majority, who, aside from what good traits they possess from a life insurance standpoint, are most of them drinkers of intoxicants, who vary all the way from the worst inebriates up to the regular every-day tippler and the so-called thoroughbred sport.

Scranton Medical Society and Tuberculosis.—For some time past a number of the leading members of the Lackawanna County Medical Society have been impressed with the necessity of having the health authorities of Scranton take more active measures to prevent the spread of consumption and reduce the death rate from that disease to a minimum. At a recent meeting of the society it was decided, after a general discussion, to appoint a special committee to draft a memorial covering its views on this most important question. That the society should undertake in the city of Scranton an active campaign against tuberculosis, or consumption, which is the most frequent disease throughout the civilized world. It causes 150,000 deaths in the United States yearly, about 8,000 in Pennsylvania, and considerably over 100 in Scranton. In Scranton the annual rate of deaths from consumption is increasing. It causes one-third of all the deaths between the ages of 15 and 65.

Ravages of Cholera.—The ravages of cholera in the Old World are set forth in mail advices received by the Marine Hospital Service. From Manila Chief Quarantine Officer Perry makes a conservative estimate that 75,000 cases of cholera have occurred in the Philippine Islands since March 20 last, with a mortality of 75 per cent. He says under date of Sept. 19 that the disease has disappeared from those provinces first infected, but those most recently infected are suffering severely. The Province of Iloilo and the adjacent island of Negros are badly infected, and the situation is alarming. Some of the towns in these provinces have lost 10 per cent. of their population, and the epidemic continues elsewhere. In Japan the latest advices show that there have been 4,329 cases and 1,650 deaths from cholera. In China the Provinces of Hunan and Shansi are most affected. The disease is epidemic at Nanking, which reports 40,000 deaths; at Shoo-Yanghsien, with 3,000 cases a day, and a number of other cities. In Hongkong since the beginning of the outbreak there have been 459 cases and 396 deaths, but the local authorities declare the colony free from plague infection. Surgeon General O'Reilly has received a report from Lieut. W. J. L. Lyster of the medical department, who is attached to the United States Legation Guard at Peking, from which it appears that the American soldiers are the only foreigners who have escaped the epidemic of cholera up to date. According to a report of the Director-General of the Egyptian Department of Health, the cholera epidemic continues to claim a large number of victims. The number of cases registered during the week ended Sept. 15 amounted to 9,467, with 8,278 deaths. Of the 28,520 cases of cholera registered between July 15 and Aug. 15, 23,684 were fatal. In Alexandria during the week ended Sept. 15, 64 cases of cholera occurred among Europeans, with 41 deaths, and during the following five days 35 cases and 25 deaths were recorded.

University of California.—A development of the equipment of the University of California's College of Medicine, to consist of a clinical hospital that will cost $400,000, has been proposed in a report submitted by a

committee representing all interested factors in the university administration.

University of Michigan.—The new Medical building in its exterior is completed. It is hardly probable that the interior will be finished before the end of the semester. One of the most important changes that has taken place in the faculty is the resignation of Dr. Eliza Mosher, professor of hygiene and Dean of the women in the university. She has gone into private practice in Brooklyn.

OBITUARY.

DR. FREDERICK A. PACKARD.

DEATH at the outset of a promising career is pathetic, but the death of one in the heyday of success has a tragic character which intensifies the bitterness of personal and professional loss. This must be the feeling of the many friends of Dr. F. A. Packard, whose death from typhoid fever in his 39th year took place in Philadelphia, on November 1st.

Few men exemplified better that high type of physician seen now in many American cities—more often in this country than elsewhere—a man of birth and breeding with hereditary attachments—he was the son of the well-known surgeon, Dr. I. H. Packard—and early affiliation with all that is best and noblest in our profession. Combine such advantages with a nature of singular sweetness and firm gentleness—"manhood fired with female grace"—and add a devotion to the study of medicine, the outcome of the 40th year is apt to be a product of rare value in a community. Such was Fred Packard as his friends knew him.

After graduating at the University of Pennsylvania, he served as Interne in the University and Pennsylvania hospitals and then began to practice in his native city. His tastes early led him into clinical medicine and he became one of the demonstrators in the University School and assistant physician to the Hospital. The Transactions of the Pathological Society and the files of the MEDICAL NEWS bear witness to the activity of his early years, and he quickly became recognized as one of the most capable among the younger clinicians of the country. He was elected on the staff of the Philadelphia Hospital and after serving as assistant physician to the Children's Hospital became full physician. With such opportunities his sphere of usefulness widened and he became known to successive classes at the University as a zealous and conscientious teacher. The election to the physicianship at the Pennsylvania Hospital still further extended his field of clinical study. In the rearrangement of the development of medicine, after Dr. Pepper's death the prospects of promotion at the University seemed slight and he gave up active teaching to devote himself wholly to hospital work and general medical practice. His acknowledged skill and singular charm of manner placed him in a position among the very best of the practitioners of his city. In recognition of his intimate relationship with the Medical School for so many years and of his standing as a citizen he was elected a member of the Board of Trustees of the University.

From the outset of his career Dr. Packard was an active contributor to medical literature. Upon the diseases of the heart, in which subject he was particularly interested, he made many contributions. His papers on Typhoid Fever, on Trichinosis, on the Visceral relations of Tonsillitis, and his recent contributions on Paget's disease may be mentioned as models of accurate clinical presentation. All of his work bore the stamp of care and thoroughness.

But the man in Dr. Packard was greater than the doctor and it is that feature that makes his loss so deeply felt in a wide circle, professional and social. A warm affectionate nature made him beloved by his colleagues and patients who had learned to value his judgment as a physician and to seek his advice as a trusty friend. That such a man should have been taken in the midst of his days of usefulness is indeed an irreparable loss. To his father, an honored veteran in our ranks, and to his brother, Dr. Francis R. Packard, the Editor of the American Journal of the Medical Sciences, we extend our deepest sympathies.

CORRESPONDENCE.

OUR LONDON LETTER.

(From Our Special Correspondent.)

LONDON, October 25.

A ROYAL PROCESSION—THE KING'S PHYSICIANS CONSPICUOUS BY THEIR ABSENCE—AN INVESTITURE AT BUCKINGHAM PALACE—HONORS FOR MEMBERS OF THE MEDICAL PROFESSION.

TO-DAY our gracious sovereign King Edward VII. is driving through some eight miles of his capital to show himself to such of his lieges as may care to go and look at him. This procession is intended by way of compensation to Londoners for the loss of the promised "show" in June. His Majesty exhibits himself to his people in all the pride, pomp and circumstance of Kingship. Except that he rides in a carriage, the situation is exactly that described by Thackeray when he wrote of King Canute:

'Twixt the Chancellor and the Bishop walked the King with steps sedate,
Chamberlains and grooms came after, silver sticks and goldsticks great,
Chaplains, aide-de-camps and pages—all the officers of State.

In the crowd of dignitaries and Court officials, however, that accompanies the King, the doctors to whom he owes his life are conspicuous by their absence. This is in accordance with court etiquette which is founded on medieval superstitions and the traditions of a past order of things. The medical profession which in this country is, as a class, commendably free from the spirit of flunkeyism, bears the slight put upon it by exclusion from the State ceremonies with the fortitude born of indifference. Men like Treves could hardly think it high honor to ride in a carriage with grooms-in-waiting and women-of-the-bedchamber. Yet the fact remains that as Sergeant Surgeon to the King he is a Court official and as such it seems strange that he is not considered worthy of a place in the royal procession. The fact that neither he nor his colleagues, one of whom is Lord Lister, are regarded as worthy of that honor is a striking proof of the social inferiority which is the badge of the medical tribe in this land of freedom which is still haunted by the ghost of a dead feudalism.

The King who is the "fountain of honor" is ready enough to show his gratitude to his medical counsellors by the bestowal of distinctions such as he showers on successful tradesmen. But in a social sense he does not shed the light of his royal countenance upon them. Neither his physicians-in-ordinary or extraordinary, nor his honorary physicians and surgeons are invited to Court functions; nor are they asked to dine with the King. If His Majesty deigns to sit at the same table and to play bridge with some of them at the house of a

financial magnate, who has been graciously allowed to prove himself a friend in need, this is done in the strictest privacy. The King might be granting the social recognition implied in these privileges, remove one of the grievances most keenly felt by the medical officers of the army, their systematic exclusion from some of the military clubs. But he is not likely to do so, for such mind as he possesses is hidebound by etiquette and precedent, and, like the French chamberlain who thought the monarchy in danger because Lafayette appeared before the King without the regulation stockings, Edward Rex would think that the admission of doctors to the sanctuary of his Court might be the first step towards a revolution.

It has been said that the medical profession, if its social position is not all that might be desired, has no reason to complain of the want of titular distinctions and decorations. Yesterday the King held an Investiture at Buckingham Palace. Among those "invested" with the insignia of various orders were the President of the Royal College of Physicians of London, Sir William Church, a worthy man who was a mighty cricketer in the days of his youth and is said by his friends to know something of medicine; Sir Henry G. Howse, President of the Royal College of Surgeons of England, Surgeon to Guy's Hospital, whose early career was one of meteoric brilliancy, of which in later life the appearance of more dazzling luminaries has somewhat paled the ineffectual fires; and the Presidents of the Scottish and Irish Colleges, with the Director-general of the Army Medical Service, and a few medical officers of the various public services. These are to be looked upon as decorations given to the office rather than to the man. Personal distinction is recognized in the honors bestowed on Professor MacEwen of Glasgow and Mr. Victor Horsley. Sir William MacEwen is beyond all question the best of all our surgeons still on the active list. He is the pioneer of brain surgery, and of his work in many other provinces of surgical knowledge and practice it may be said with truth that *nihil quod tetigit non ornavit*. He is however what the Scots call a "dour" man, with more than the reticence characteristic of his countrymen, and with an utter want of talent in the way of self-advertisement; hence his name is not nearly so well known to the public as those of men who have reached the pinnacle of fame by walking in his footsteps. Sir Victor Horsley, a later and somewhat less successful though not less bold explorer than MacEwen, in the undiscovered country of the brain, needs no sacred bard to sing his praise; his candle has been set in a candlestick where all may see it. Of late years he has allowed himself to be dragged into the muddy arena of medical politics. He is successful as a stump orator, but his performances, though they tickle the ears of the groundlings, make the judicious grieve. It is felt that he is giving up to a party what was meant for mankind. The name of Mr. Alfred Cooper, on whom the "honor of knighthood" has also been conferred, is probably unknown to America. Sir Alfred is however one of the best known of the medical fraternity in London. In early life it was his fortune to be thrown much in contact with guardsmen and other scions of the aristocracy who when suffering from the displeasure of Venus sought consolation from him. When in course of time they subsided into matrimonial virtue, Cooper was established as the family oracle. In this manner he acquired a large practice in the fashionable world. His professional connection with the royal family has, it is understood, been like Sam Weller's knowledge of London, extensive and peculiar. He accompanied certain members of it to St. Petersburg many years ago, and had to deal with an abscess in the regions which he has taken for his province. Things looked ugly, but all ended well. Sir Alfred Cooper may be said to be connected with the royal family by marriage, for his wife is a sister of the Duke of Fife. Nothing perhaps could show more clearly the social position of the medical profession in this country than the fact that though the lady had a past, and her offense was so public that Society shut its doors against her, it was considered a *mésalliance* when she married a doctor. Another new knight is Sir William Job Collins, a medical graduate of London University, surgeon to one of the minor hospitals for diseases of the eye, and formerly chairman of the London County Council. He is perhaps best known as a determined opponent of vaccination, an attitude of mind which he inherits from his father, who after years of service as a public vaccinator lost faith in what the son styles "the Jennerian rite," and denounced it with the zeal characteristic of the convert. Sir William Collins was a member of the Royal Commission on Vaccination which was in labor for seven years and finally brought forth the "conscientious objector." He was one of the two members who signed the minority report. Apart from his heresy, the medical profession might justly be proud to claim him; but unorthodoxy on the vaccination question brands a man with a mark which no scientific merit in other directions can efface. It is this which quite lately drove Professor Crookshank from the Chair of Bacteriology at King's College, and which has made Charles Creighton, a really brilliant man, author of a History of Epidemic Diseases which is a monument of erudition, and for some years Demonstrator of Pathology at Cambridge, a professional Ishmael. Sir William Collins has had harsh treatment from his profession. He was undoubtedly the most brilliant man of his day at St. Bartholomew's Hospital, and might fairly have looked to getting an appointment on the staff. The authorities would have nothing to do with a man whose father was an "anti vack" (*sit venia verbo*, which by the way is Jenner's own). Young Collins therefore shook the dust of the place off his feet and looked for an outlet for his intellectual energy elsewhere. He has done good work for science in the London County Council, for it is to his initiative that the establishment of the pathological laboratory for the lunatic asylums under its control is due.

Sir Arthur Conan Doyle, owes his knighthood to his literary work, and to the part he has taken in calling attention to deficiencies of one kind or another in the British Army. He is a medical graduate of Edinburgh but soon gave up the practice of physic for literature. He served as physician in one of the field hospitals in South Africa, but his object in going out was avowedly to gather materials for the history of the war which is said to have brought a rich reward exceeding great in solid cash.

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

SPONTANEOUS RUPTURE OF THE UTERUS, OCCURRING DURING LABOR, SUCCESSFULLY TREATED BY OPERATION—DIPHTHERIA IN BRETONNEAU HOSPITAL—RELATIONS OF ANOPHELES AND MALARIA—PUNCTURE OF THE SPINAL CORD FOR STUPOR—THE DIFFICULTIES OF ISOLATING THE BACTERIUM COLI IN COLONIAL DYSENTERY—RESEARCHES IN GENERAL ANESTHESIA BY ETHYL CHLORIDE—OPERATIONS ON EXTRA-UTERINE PREGNANCY.

THE fall meetings of the French Societies have begun with their usual number of interesting papers.

RICHELOD read at the meeting of the Academy of Medicine, October 7, 1902, an observation of spontaneous rupture of the uterus successfully treated by operation, sent in by M. Lafourcade of Lyons, of which the following is an epitome: The woman was forty-two

years old, a multipara, and was taken in labor the 3d of last May. Labor was prolonged. The patient suddenly experienced a "tearing sensation" in the abdomen, with unspeakable pain, and soon the contractions of the uterus stopped altogether. The diagnosis of rupture of the uterus was made, and a laparotomy was immediately done. An incision of the abdominal wall was made and the fetus was found in the midst of the coils of intestines. It was brought into the world, and then the matrix was brought into the wound and divided close to the vagina. The peritoneal cavity was cleaned entirely and the abdominal wound was closed. Before the end of three weeks the patient had entirely recovered. Upon examination, the rupture occupied the left border of the uterus and presented a vertical portion between twelve and thirteen centimeters long between the two folds of the broad ligament, and a transverse portion five or six centimeters long on the front surface, just below the isthmus. The uterine tissue examined by the microscope showed normal characteristics, except at certain points, where small nodules of embryonic cells were found, which might be attributed to a light degree of interstitial myositis. It is difficult to explain just why this rupture took place, because the woman had enjoyed such perfectly good health and had previously had four normal, uneventful childbirths.

JOSIAS communicated, in the name of TOLLEMER and himself various statistics of cases of diphtheria observed in the Hospital Bretonneau since the 12th of March, 1901, (the day when the Bouchut Pavilion was opened), to March 1, 1902. The number of children afflicted with true diphtheria, showing the Klebs-Löffler bacilli, cared for during this period was 580, with 76 deaths, or, in round numbers, 13 per cent. This should be reduced to 10 per cent., because 18 of the children should properly not be counted, because they were sent to the hospital so nearly dead of the disease that they lived less than twenty-four hours after admission. Of the other 58 children, who lived more than twenty-four hours after admission, 29 died from a secondary broncho-pneumonia. This secondary disease should be regarded expressly as the principal cause of death. A significant feature of the attacks is that the disease possessed a high degree of contagiousness, and therefore the children afflicted were isolated just as soon as possible. So far as treatment is concerned, he believes it should be begun just as soon after the disease is discovered as possible. Every child as soon as it is admitted to this hospital, receives, on the same day, under the skin of the abdomen, an injection of 10 to 30 c.c. of antidiphtheritic serum, according to its age and the severity of the attack from which it is suffering.

LAVERAN read notes concerning his investigations in the Island of Corsica, as to the relations between mosquitoes and malaria. He states that he found the *Anopheles* species in all parts of the island where malaria abounds. For instance, of 182 mosquitoes captured in various swampy localities, 157 were *Anopheles*, while 25 were *Culex*. Of the *Anopheles*, fully 86 per cent. belonged to the *Anopheles maculipennis* species.

MOTY, a military surgeon, narrated observations of his upon a young soldier during the greater part of a year, who had suffered from a stupor, lypemaniacal in character. Two punctures of the spinal cord, carried out four days apart upon this young man were followed by disappearance of the mental trouble.

LESAGE, at the Academy of Sciences, September 1, 1902, read a paper on the difficulty of isolating normal *Bacterium coli* in dysentery in the colonies. To be more exact, these difficulties were greater during certain periods of the disease. For example, he found the normal bacteria in only six cases out of twenty-six, distinguished by prompt coagulation of milk and the special odor to cultures which the germ gives. In the second period of the disease, he found it only 18 times in 63 cases. In all the other patients in both series, he found the paracolon bacillus. In the third or last period of the disease, on the other hand, he always found the normal bacillus. In looking for causes of this transformation from the normal coli into the pericolon, he was convinced that the cultures of the latter, which seemed to be in the first pure, contained in reality other formations of this germ.

LEDENTO, at the Society of Surgery, October 1, 1902, presented in behalf of H. Jirard, a surgeon in the Marine Service, a report concerning general anesthesia by chloride of ethyl. He has studied minutely the effects of this anesthesia in man and animals, and his observations confirm entirely those which have been published previously. In spite of the optimistic hope of many extremists, it is certain that chloride of ethyl, given in large doses, may bring about deadly symptoms. This Jirard has easily proved in animals. On the other hand, compared with some of the other anesthetics, it possesses comparative harmlessness. It may be applied with advantage as mixed anesthesia.

PICQUÉ read a paper on operations for extra-uterine pregnancy in behalf of Chevalier. In the first patient there was a rupture of the extra-uterine pregnancy, with a flooding of the peritoneal cavity. The operator interfered at once and saved his patient. Her recovery was perfect. The second case simulated disease of the appendix, and Chevalier made the incision of McBurney, which proved the appendix to be sound, but there was a blood-tumor of considerable size formed by a rupture of the pregnancy. Here again recovery was without incident. The last woman, suffering from the same condition, was operated on with similar success, and differed from the others only in that it was further advanced, because he found the embryo separated from the blood clot.

SOCIETY PROCEEDINGS.

THE JOHNS HOPKINS HOSPITAL MEDICAL SOCIETY.

Meeting Held October 6, 1902.

Dr. Hurd, in the absence of Dr. Osler, in the chair.

Aneurism of the Aorta.—Dr. McCrae showed two cases, one a thoracic and the other an abdominal aneurism. The first was a male thirty-three years old, a plumber and trapeze-performer. The patient gives no definite history of syphilis. In 1898 he was struck in the chest by a car, and two weeks later he was again struck in the same place. Two weeks after this he had dyspnea and felt as if there were a valve in his throat. He was treated in one and another hospital for several months before a diagnosis of aneurism was made. On one occasion, in November, 1899, while acting as orderly in a hospital he fell while carrying a patient. On his first admission to the hospital in January, 1900, the diagnosis was made of an aneurism of the right subclavian artery. There was marked pulsation in the right infraclavicular space and the right clavicle was distinctly raised at each systole. Operation was advised, but was refused by the patient. He was in the hospital some weeks and was markedly improved by rest and the administration of potassium iodide. After his discharge he was readmitted twice during that year on account of attacks of pain, brought on by overexertion in each case. In November, 1901, he came in for the fourth time; his cough was so rasping and there was such a stridor present during respiration that the diag-

nosis of aneurism was made by several of the resident physicians who were on the floor above when the patient came in. At this time there was dilatation of the whole arch, vocal paralysis, inequality of pulse and pupils, and the fluoroscope showed that the tumor had extended well to the left of its original limits. The pulsation was also plainly visible above the manubrium. At the present time there is a large tumor occupying the site of the manubrium and extending to the left of the sternum. The left clavicle is lifted during systole, not the right, as at his first admission. The noteworthy features in the case are: (1) The fact that overexertion brought on each attack of pain and dyspnea; (2) the traveling character of the aneurism, it having passed from the right subclavian artery to the arch of the aorta and extended thence well to the left of the transverse portion of the arch; (3) the entire absence of pressure symptoms at this time, although these were present earlier during his illness.

The second case was also that of a man thirty-three years old and without a definite history of syphilis. On admission at the end of 1899 there was marked epigastric pulsation, and on deep palpation an expansile tumor could be clearly felt. Operation was decided upon, and in January, 1900, Dr. Finney opened the abdomen and found a large aneurism at the origin of the celiac axis. He inserted about nine feet of wire into the aneurism and passed a weak electrolytic current through it for one hour. The patient did well after the operation and was soon sent out in good condition, there being no longer any expansile character to the tumor. He has recently returned complaining of abdominal pain and of inability to walk more than a short distance without stopping to rest. This latter condition, known as "intermittent claudication," is usually associated in man with marked arteriosclerosis. The present case supports the view that the condition is dependent upon circulatory rather than nervous disturbance. As is well known, intermittent claudication is most frequently found in horses and is there dependent in almost every case upon the presence of a verminous aneurism. The hind legs are almost always affected in horses. It is to be noted that the patient has at the present time a full epigastrium, with a wide area of pulsation and an expansile tumor. The leading features of the case are: (1) The temporary success of the operation; (2) the existence of intermittent claudication, and (3) the existence of abdominal aneurism in so young a man. If a second operation is not thought advisable by Dr. Finney it seems as if gelatin injections would be the best form of treatment for this patient.

There is little doubt that in both these cases syphilis was the etiological factor.

Splenic Anemia.—Dr. McCrae showed a patient who was first admitted on the surgical side of this hospital in December, 1890. He had a leg-ulcer at the time, which was diagnosed as syphilitic, probably incorrectly. In 1901, he was admitted on the medical side, complaining of a large spleen. He gave a history of having had jaundice and fever while in Mexico 17 years ago. He was told by a doctor in Mexico that his spleen was very large. On admission in 1901 the patient was very anemic and his skin had a sallow hue. There was local pigmentation, fever and jaundice. He had a large spleen and his blood-count was as follows: Hemoglobin, 53 per cent.; red blood-corpuscles, 3,500,000; leucocytes, 6,000, with a normal differential count. Rest and arsenic brought about a decided change in the patient's condition. At the present time he has another leg-ulcer and is very anemic. His spleen has not diminished in size. The blood is about the same as it was last year, except that a number of nucleated red blood-corpuscles are now present. The present features in the case are: (1) The existence of so large a spleen for a period of 17 years, it being possible that the large size is due to malarial or syphilitic infection, though neither seems a likely cause; (2) the absence of ascites, of hemorrhage, and of marked hepatic symptoms. It is the most chronic case of splenomegaly on record here.

Before showing the case, Dr. McCrae called attention to the fact that the term "splenic anemia" included a group of cases with two features common to all—a large spleen and anemia. Some of the cases show in addition gastric hemorrhage, and others hepatic cirrhosis. It is to the case with cirrhosis that the name of "Banti's disease" is given. In a case such as the present the treatment can only be that of anemia. Excision of the spleen is but rarely indicated.

The Treatment of Aural Exostoses.—Dr. H. O. Reik showed a patient who had noticed a defect in his hearing two years ago. An exostosis was discovered at that time just within the external auditory meatus. It has increased in size quite rapidly and now nearly closes the meatus. Exostoses of this type are most frequently seen in divers, and it is to be noted that the patient shown gives a history of having been in the water a good deal. The condition usually follows chronic suppuration, which leads to periostitis, and this goes on into inflammation of the bone. In every textbook which has been consulted, with the single exception of the American Text-book of Diseases of the Eye, Ear, Nose and Throat, the advice is given that aural exostoses should only be operated upon under two conditions—such growth preventing the escape of secretions, or the affection in the opposite ear being such that without the removal of the exostosis the patient would become deaf. Many lines of treatment other than operative have been recommended. The first of these was the use of silver nitrate, and there were recommended after this, in succession, dilatation of the canal, boring through the growth, and more recently, electrolysis. All these are known to be painful and lengthy methods. A review of the literature shows that 129 cases have been reported in which operation was tried and in which there was no otitis media, past or present. Every case was cured or relieved of deafness. In only two per cent. was there any postoperative infection, and even in these cases there was eventual recovery. On the other hand, in the reported cases where no operation was done, death followed from mastoiditis, meningitis, or postoperative destruction of the drum-membrane. It would seem therefore as if surgical treatment should be recommended, and that early. The operation is very simple. If the growth be near the auricle it can be removed with a few blows of the chisel; if near the tympanum, Knapp's operation may be done. In this operation an incision is made back of the auricle, which is then pulled forward so that the growth is attacked directly at its base.

Dr. Randolph said that exostoses such as had been presented that evening were in general such slow-growing tumors that he felt as if most of them were better off without operation unless the special indications which have been mentioned arise. He remembered seeing a case in which after operation the whole side of the patient's head swelled up and recovery was very slow. Such intense reactions often follow operative procedure. In this particular case he was inclined to follow the progress of the case very carefully before deciding on operation. If operation were indicated, silver nitrate, though slow, is of great value. In one of his patients for whom operation was clearly indicated, he bored through the growth with silver nitrate, of course ex-

tending the treatment over a considerable period of time, but eventually getting a perfect result.

More Radical Operation for Carcinoma Cervicis Uteri.—Dr. J. A. Sampson presented a paper embodying the results of his pathological study. He concludes that metastases after operation for cancer of the cervix occur in very minute lymphatic glands in the pelvis, or in the periureteral tissues, so frequently that a much more radical operation than is at present done seems to be indicated in a majority of cases. Dr. Sampson's paper will be published in full in the November number of the Johns Hopkins Hospital Bulletin.

THE JOHNS HOPKINS HOSPITAL MEDICAL SOCIETY.

October 20, 1902.

Dr. Osler in the Chair.

Aneurism of the Aorta.—Dr. McCrae presented a case of aneurism whose traveling character was even more striking than that of the case shown at the previous meeting. The patient, a male, forty-nine years old, was taken sick in September, 1901, with a cold and cough but without expectoration. Later he had pains in the thorax, but continued to work, however, until December of the same year when he was admitted to this hospital complaining of a cold and shortness of breath. He had had rheumatism when eight years old, used alcohol in moderation and was by profession a coachman, often exposed to severe weather. He denied syphilis. On admission, at that time, there was a heaving impulse at the manubrium but none in the episternal notch nor was there any diastolic shock. The manubrium was dull on percussion, there was no pulsation in the back, no tracheal tug, no impairment of voice, and no inequality in the radial pulses. After ten days the patient was discharged improved. He continued to work until July, 1902, when he was again admitted complaining of a cold and cough and of pain in the thorax. He voice was now distinctly husky. He was admitted for the third time on October 15, 1902, with pain in the thorax, huskiness of voice, dyspnea, a cough with a remarkable "goose" quality, and loud stridor during respiration. On examination the patient was found to have prominetnt and visible pulsation in the third right interspace, a diastolic shock and dulness on percussion over the pulsating area, but no tracheal tug. There was tympany over the right lung in front. On the following day there was dulness over the front of the left lung as well as restricted respiratory movement. On October 18 the prominence disappeared from the right side and became evident on the left, where there was a palpable shock and a heaving impulse in the first and second interspaces. The apex of the heart was outside of the nipple line. The condition of the lungs was interesting. On admission the right lung was evidently pressed upon, but 24 hours later the right lung became quite clear and the left quite dull. Vocal fremitus was retained over the left lung. There was a systolic murmur audible at the base of the heart as well as over the right side of the chest. The left radial pulse is now distinctly weaker than the right. The noteworthy features of the case are, first, the change in the aneurism itself, the signs being transferred from the right to the left side; and second, accompanying this, a change in the physical signs of the lungs.

Dr. Osler remarked that it was unusual to have such marked disappearance of aneurismal signs. Occasionally after operation the pulsation disappears from the aneurism and the sac shrinks. A marked frequent cause of disappearance of the signs, however, is in cases where the signs of aneurism are really due to the so-called dynamic pulsation of the aorta, in cases of aortic insufficiency following ulcerative endocarditis or anemia.

Aneurism of the Aorta; Death from Gastric Hemorrhage.—Dr. Osler reported a case of a male, forty-five years old, who was admitted to the hospital in February, 1901. He had had pains in the left side and dyspnea since the summer of 1900. He had slept for months in an erect position, but had had no cough nor dysphagia. He had been losing weight. At that time there was a diffuse impulse, best felt on the left side. There was no diastolic shock nor aortic murmurs. The right radial pulse was distinctly felt. The patient was discharged improved. He was admitted the second time in August, 1901, again complaining of pain and dyspnea. There was slight dulness over the manubrium, diastolic shock but no thrill. There were pain and tenderness in the abdomen but no marked gastric symptoms. In August, 1902, the patient was admitted for the third time, distinctly anemic and complaining of cramps in the abdomen. There was a diffuse impulse in the chest without any localizing signs. On October 14, and again on the 15, and 19, he vomited large quantities of bright blood and passed a considerable amount of changed blood per rectum. He died on the evening of October 19. Aneurisms of the aorta may be grouped into those that give signs and those that give symptoms. An aneurism of the intrapericardial portion of the aorta may give neither signs nor symptoms. An aneurism of the transverse arch usually gives both, as is readily understood when one recalls the confined space between the manubrium and the spine. Aneurism of the terminal portion of the arch or the thoracic aorta usually gives symptoms but no signs. In this particular case the aneurism was found to belong to the third group. It was adherent to the spine of the thoracic vertebræ, which it had commenced to erode. When the aneurism was found the question arose as to how it could have been the cause of death. On further examination, however, the cause was found, not in the aneurism but in an ulcer of the stomach, which had eroded one of the gastric arteries. It cannot be called a latent ulcer for there had been some gastric symptoms.

Four Cases of Skin Cancer Treated by the X-Rays.—Dr. Gilchrist reported four cases apparently cured by this treatment. The first case is that of a female who, five and a half years ago, noticed a "white wart" on the right lower eyelid. Remaining quiescent for a year, it then spread down the cheek and was first seen two years after its appearance. Operation was advised but was refused. The growth extended from the outer canthus of the right eye to the angle of the mouth and thence up to the nose. In appearance it resembled a rodent ulcer. No glands were palpable and the growth caused no pain. The X-rays were used daily with exposures of ten to fifteen minutes duration. After 29 exposures the edges of the ulcer became raised and surrounded by an inflammatory areola. A section of the tumor made before treatment showed it to be a true epithelioma; section made after the 50th exposure from a corresponding spot in the growth shows no epithelial down-growth whatever. At present nothing is to be seen but a smooth, supple scar. The lower eyelid is everted and there is an exudate over this which keeps up some irritation. No glands are palpable.

The second case is that of a male who noticed a "seed wart" on the left side of the nose four or five years ago. After a time it became irritated and spread and finally perforated the ala of the nose, the perforation being about the size of a pea. When first seen the growth was an exuberant, granulomatous one but no glands were palpable in the vicinity. The treatment lasted for three months. There were 63 daily exposures and 20 more at

short intervals. Following the foreign method, the growth was curetted before the X-rays were used. At present the lateral surfaces of the growth are definitely cured. The upper portion is apparently cured. The patient has received no treatment for a month. The third case is that of a male who noticed a "white wart" on his lower right eyelid eight or nine years ago. A year later this extended to the inner canthus of the eye and thence to the nose. On two separate occasions it was curetted at the Presbyterian Hospital in this city and the patient returned home apparently cured, only to find recurrence after a time. When first seen the growth involved the upper eyelid and eyebrow and extended on to the nose, covering an area 8 cm. in horizontal extent and 7 cm. vertically. The patient received daily treatment for four months. At present there is but a slight lesion left in the center which most certainly will yield to the treatment. There are no glands palpable.

The fourth patient, a female, thirty-eight years old, was unable to be present at the meeting. Four years ago she noticed a pimple on the side of her nose. Its appearance was like that of a rodent ulcer with "rolled edges." The center was like a scar. A section made four months ago showed that there were still epitheliomatous cells left but the groups of these were surrounded by lymphoid cells and were evidently being destroyed. No glands were palpable. The growth measured 23 by 17 mm., its edges were raised about one-third of a millimeter above the level of the skin. It extended over the bridge of the nose. Following the method of treatment recently seen in London, the edges of the growth were pared down with a knife before exposure to the X-rays. After 20 exposures the ulcer definitely broke down and the rolled edges became soft. When the patient was seen four months after the treatment ended the ulcer had entirely healed. The patient is now in good condition. The treatment was continued after a slight interval of rest.

Dr. Gilchrist remarked that use of the X-rays marked a definite advance in the treatment of skin cancer. At the present time we have learned to know that (1) The X-rays will cure a rodent ulcer, except when the pericranium or periosteum or other deeper structures are involved; (2) The X-rays have no bactericidal power. Their action is cumulative and reaches deeper than that of chemical reagents; (3) When used on the skin they have a stimulative action if the current be weak and a destructive action if the current be strong. The X-rays apparently select the malignant cells and it is therefore urged by some that a strong current be used even at the risk of causing X-ray burns. For the treatment of skin cancer a medium soft tube is recommended, with a current of 3 or 4 amperes. Personally, he used a self-distance of from 5 to 6 inches, sometimes less. The treatment usually lasts 15 minutes but may be as long as 30 minutes. During the course of the treatment a mild redness appears over the growth and hairs become loosened. The effect varies with the idiosyncrasies of the patient. Burns usually occur, if at all, in one week. They may, however, be delayed for months. He had recently seen 34 cases in Manchester which had been perfectly cured by the X-rays, and Finsen reports 45 cases cured by the X-rays. For the avoidance of burns a special glass tube has recently been devised, which is opaque except at the ends. An induction coil may be used and gives entire satisfaction. Thick tin foil is found to be as good as lead for the plates, especially if it be covered with layers of blotting paper. In view of the importance recently attached to the Finsen-rays, it may be noted that a combination of the Finsen-rays and the X-rays has been suggested for certain cases, the X-ray being especially adapted for the ulcerative part of the growth and the Finsen-ray for the nodular elements. The cosmetic results obtained by the Finsen-rays are wonderful.

Studies in the Embryology of the Kidney.—Mr. Max Brödel remarked that the general embryology of the kidney was well enough given in text-books but that there were certain interesting points not given in them to which he wished to call attention. In his previous paper* he had shown that in seventy per cent. of adult kidneys, the main vessels entered the organ in front of the pelvis. The present study of the kidneys of embryos was undertaken in order to dertermine the reason for this arangement. The kidneys were taken from fetuses varying in age from three and one-half weeks to eight months, which were procured through the kindness of several physicians in the city. When the embryo is four weeks old, the kidney, as it ascends from the pelvis, slides between the umbilical vessels and the Wolffian duct. At the fifth week it passes through the umbilical vascular fork and now becomes an abdominal organ. At the sixth week it is distinctly above the umbilical vascular ring, the upper poles swing out of the pelvis, which, though formerly anterior, is now inclined toward the mid-line. If there is to be a horseshoe kidney the fusion must take place before this period. At the eighth week the kidney fits into its lumbar pocket, whose shape is determined by the curve of the abdominal wall, the adrenal gland and the sexual gland. The pelvis becomes inclined posteriorly and it is at this time that the vessels enter the organ. The anterior half of the kidney is nearer the aorta, hence the vessels enter anterior to the hilum. The anterior portion of the kidney thus gets its blood first, and is correspondingly more rapidly developed. If the kidney ascends into the pelvis without rotation, *i.e.*, if it retains the position which it occupied at the sixth week, then the vessels enter posterior to the hilum. This condition is seen in thirty per cent. of adult kidneys.

Cryoscopy as an Index to Renal Insufficiency in Surgical Diseases of the Kidneys.—Dr. M. B. Tinker said the term "cryoscopy" was derived from the Greek word *cryos*, meaning frost. In November, 1882, Raoult introduced cryoscopy as a laboratory method in chemistry. Extensive experiments have been made since then and now the freezing point of almost every standard solution is well known. The law is fairly constant that a given solution containing a given quantity of solids, freezes uniformly at the same temperature, within limits of the thousandth part of a degree. In 1897, Koranyi first applied cryoscopy to medical purposes, at Budapest. Although the German literature on the subject is already large, only two English papers of importance have been observed. Ogston of Aberdeen reported six cases in which he used the method, and Huddleston of New York reported certain cases in which he used the method. His thermometer, however, registered only fortieths of a degree. The freezing point of a fluid is lower, the more solids it contains; salt water freezes at a lower point than fresh water and in like manner albuminous urine freezes at a lower point than normal urine. If the waste of the body be normally excreted, the freezing point of the urine varies but little. The same is true of the blood, where it has been shown that under normal conditions the variations do not exceed two one-hundredths of a degree. In twenty cases in which Dr. Tinker had tested the method, the variation in the freezing point of the blood did not exceed one one-hundredth of a degree. There was more variation found in the freezing point of the urine, the limit being from —0.9° C. to —0.2° C. As to the accuracy of the method, in two cases in this hospital where pus-kidneys were present, the freezing point of the urine was very low. In other cases, where at operation there

* Johns Hopkins Hospital Bulletin, 1901, Vol. XII, p. 10.

was considerable disease of the kidney found, but where there was still sufficient healthy tissue to excrete the waste of the body, the freezing point was not much altered. As to the simplicity of the method, twenty c.c. of fluid are needed for a good determination. In the case of blood, one can usually get sufficient from the superficial veins, withdrawing it with a syringe, as for blood cultures. The whole procedure, including the preparation of the ice and salt mixture, does not take over three quarters of an hour. As to the relative value of the method when compared with other clinical methods, the freezing point gives an index, not only of the weight of the excreted solids, but of the number of molecules of such solids. Thus information is gained which a knowledge of specific gravity will not give. The determination of the freezing point is more satisfactory than that of the urea excreted, for the latter varies considerably, and after all urea is only one of the substances excreted. The percentage of albumin or sugar cannot be determined by cryoscopy, but in surgical kidneys cryoscopy does tell whether there is enough healthy kidney to excrete the body waste.

Dr. Young remarked that there was great need in determining more than had been known about the condition of the kidney. Urea determinations had proved of little value and he had great hopes that cryoscopy would fill a real need. Kasper uses double urethral catheters and takes the freezing point of urine from each kidney. He finds the results in a large number of cases, to correspond very closely with those of his fluorizin tests. In these tests, as is well known, fluorizin is injected subcutaneously and produces an artificial glycosuria. The diseased kidney excretes but little sugar. In the application of cryoscopy, the main objection to it would seem to lie in the difficulty of getting sufficient urine for the tests. The instrument, however, can probably be made smaller than it is at present, and the tests will then be of the greatest value for clinical determinations.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

SURGICAL SECTION.

Proceedings of the Twenty-Eighth Annual Meeting, Held at Kansas City, Mo., Oct. 15, 16 and 17, 1902.

(Continued from Page 809.)

Dr. Geo. W. Crile of Cleveland, O., delivered the Address in Surgery. He selected for his subject, "Operations for Cancer of the Mouth and Neck." The author's summary is as follows:

In the past three decades there has been a continuous decrease in the operative mortality, and with the single exception of the brachiogenic cancers, even a more notable increase in the percentage of cures has been accomplished. Especially in the last decade there has been evidence of more confidence in operations as indicated by an increased number of cases submitted early. The supreme importance of early diagnosis and early and radical operation is becoming widely recognized. The same may be said of the so-called precancer stage, especially of the tongue. Except in cancer of the upper jaw, the disease is now regarded as involving the regional lymphatic system. The disease may be found in the lymphatic vessels and lymphatic glands. It rarely extends to other parts of the body. Physiological and clinical evidences show that severing the thoracic duct causes but little disturbance, owing to its free anastomosis; that the effect of resection of the internal jugular vein is practically *nil;* that unilateral resection of the vagus does not alter the heart's action, the respiration, nor the digestion, but produces a permanent hoarseness only; that division of the superior laryngeal causes anesthesia of a part of the larynx, but pneumonia is improbable; that division of the inferior laryngeal causes paralysis of the corresponding vocal cord, but interference with respiration is not marked; that the division of the spinal accessory has but slight effect on account of the double nerve-supply to the sternomastoid and the synergistic action of other muscles; that the division of the hypoglossal causes temporary interference with speech and swallowing, but compensation occurs; that the submaxillary and salivary glands may be removed without symptoms; that the removal of the sternomastoid muscle is not followed by torticollis, etc., on account of the synergistic action of other muscles. The complete removal of the lymphatic system of one side does not produce pseudo-elephantiasis of the face and head. Permanent closure of the external carotid has an operative mortality of one to two per cent., due to thrombosis and embolism. Permanent closure of the common carotid or internal carotid is attended by an operative mortality of about three per cent., but in the cancer period of life from 20 to 30 per cent. of cerebral complications follow, about 50 per cent. of which prove fatal. Temporary closure of the carotid by means of a special clamp, as shown in the writer's 43 cases, in which neither death nor cerebral complications occurred, is both efficient and safe. These physiological and clinical data lead to but two objective points in unilateral operations for cancer of the mouth or neck; namely, complete removel of the disease and preservation of the blood-supply to the brain. If necessary, sacrifice every other structure between the skin and the place of the deep muscles of the neck. Loss of blood is the greatest operative difficulty and danger. If hemorrhage is likely to be considerable the common carotid should be closed during the operation. In the mouth cases an anesthetic may be administered through rubber tubes passed through the nostrils to the level of the epiglottis, with the tongue well drawn forward. The pharynx may then be packed with gauze, so as to form an air-chamber in the lower larynx effectively, and prevent blood from entering the pulmonary tract. The dissection should be made on the same plan and as thoroughly as in the radical operation for cancer of the breast. The greater ease and certainty with which diagnosis may be early made in this region, and the rarity of extension of the disease beyond the glands of the neck, should enable the surgeon to obtain even better results here than in cancer of the breast. The hope of the patient lies in early diagnosis, early operation, and a logical technic.

Cancer of the Rectum.—Dr. Emerson M. Sutton of Peoria, Ill., reported cases of cancer of the posterior vaginal wall penetrating to the submucosa of the rectum, with fibrous but non-malignant infiltration around the rectum producing stricture. He operated by the sacral route, resorting to the von Volkmann-Rose incision. He resected the vagina, rectum, and one-half of the cervix, anchoring the healthy end of the sigmoid to the gluteal incision side of the wound. He mentioned other cases from the literature, and then gave reasons for attempting operations for extensive cancerous growths situated in the pelvis.

Treatment of Extensive Rectal Strictures.—Dr. Emil Ries of Chicago pointed out the difficulties in treating these strictures. He referred to septic conditions, anatomical changes, and the danger of recurrence. He discussed anastomosis after resection; end-to-end anastomosis; anastomosis without resection; side-to-side anastomosis after exclusion, and end-to-side anastomosis. He detailed his first case operated upon by the latter method, saying that the patient was well over five years after operation.

Ureteral Catheterism; Its Value in Male and Female.—Dr. Bransford Lewis of St. Louis, Mo., said the purposes of ureteral catheterism in connection with the cystoscope were for diagnosis and for treatment. Cases reported showed that ureteral catheterism, in both male and female, had been reduced to a practical procedure. With the author's cystoscope the operator was enabled to look directly on the field. Air was used for inflating the bladder. One or both ureters may be catheterized at the same sitting. The operation was performed under local anesthesia. Case I showed the falsity of an X-ray diagnosis of stone in the ureter. Case II showed chronic unilateral pyelitis and cystitis. Irrigations of the pelvis resulted in a cure. Case III was one of tubercular inflammation of the bladder and kidneys, which improved under irrigations. Case IV, hemorrhagic cystitis and bilateral pyelonephritis; under irrigations of renal pelvis was much improved.

Dr. Eastman of Indianapolis, Ind., thought a removable roof to facilitate withdrawal of the cystoscope, leaving the catheter in the ureter, would be an improvement.

Dr. Martin of Missouri found the introduction of the catheter easier than it would seem, and there was no trouble in withdrawing the cystoscope while the catheter was in the ureter.

The Mechanics of Intubation.—Dr. B. F. Gillmor of Creston, Iowa, discussed the mechanical problem of intubation, and exhibited drawings and X-ray plates. He emphasized the importance of acquiring manual familiarity with instruments, the means by which this may be acquired, and then alluded to the problems of intubation and the difficulties of extubation.

Laminectomy for Fracture-dislocation of the Fourth and Fifth Cervical Vertebræ.—In the case reported the author, Dr. Joseph Rilus Eastman of Indianapolis, stated that laminectomy was followed by improvement of motor and sensory conditions, but was unsuccessful so far as saving the life of the patient was concerned. Death occurred on the nineteenth day.

After going at length into the literature of the subject, the author said that laminectomy for fracture or dislocation should be made early. The earlier the better. The longer pressure had existed, the more extensive the degeneration of the cord. Still hope need not be entirely abandoned in old cases, for laminectomy had relieved many such even after months had elapsed since the injury was received. Laminectomy *per se* was not dangerous. It represented the surest method of diagnosis of fracture-dislocation, and the most rational and efficient means of relief.

Dr. Black of Jacksonville, Ill., advised early operation or exploratory incision. He said that 250 cases operated on out of a total of 555 cases in the literature showed 25 per cent. better results than the unreported cases.

Extrinsic Traumatisms of the Spine; Their Diagnosis, Pathology and Treatment.—Dr. Thomas H. Manley of New York, in a paper on this subject, said that in the present study of all lesions of a traumatic character sustained by the rachidian structures or the medulla spinalis not followed by clinical manifestations of central complication will be included under the term extrinsic. These were designated: (1) Contusions; (2) sprains; (3) hemorrhage; (4) fractures; (5) diastasis and luxation; (6) structural and visceral complications. The most frequent injuries, according to the author, were external to the spinal cord. They were rarely of such a character as to seriously impair function, although deformity and impairment of strength occasionally followed. No serious effort had yet been made by an American author to classify the pathology, to elucidate symptoms, or to establish the differential diagnosis in this important group of traumatisms.

Spinal Concussion.—Dr. Carl E. Black of Jacksonville, Ill., in presenting this subject, called attention to the loose way in which the term concussion of the spine was used, and to the unclassified condition of such cases. The best dictionaries were quoted to show that the word concussion is misused, and should only apply to the manner in which the injury was received. A great deal of misunderstanding had arisen from the attempt of various authors to use the word to describe a distinct disorder. The various authors on surgery were quoted to show that there was a misunderstanding among writers as to the scope of the term concussion. The work of Wm. Thorburn of Manchester, Eng., was quoted as being the only rational effort which had been made to classify these disorders.

In conclusion, the author took the position that minute or capillary hemorrhage was the basis of most, if not all, of these cases, and gave the following classification of injuries produced by concussion of the spine: Primary effects. (1) Sprains; (2) contusion of the spinal cord; (3) minute hemorrhage into or around the cord. Secondary effects or complications. (1) Shock or collapse; (2) acute hysteria; (3) neurasthenia; (4) chronic hysteria.

The essayist concluded with the following sentence: "It is certainly the duty of every surgeon to protect himself as well as any corporation he may represent and the best interests of his patient, by distinguishing if possible, between the purely psychical, secondarily psychical, and the truly pathological condition, and treatment should be directed accordingly."

Spinal-cord Injury—so-called Spinal Concussion of the Cord.—In this paper Dr. Frank Parsons Norbury of Jacksonville, Ill., stated that a scientific interpretation of concussion of the cord so-called had not yet been attained. The term had become established by long usage, and was largely used because of the want of a better term to cover the clinical picture which it aimed to present. The lesion was doubtless a disturbance of the circulation due to injury to the blood-vessels and lymphatics. Intramedullary hemorrhage was thought by the author to be the immediate lesion. This conclusion was supported by the observations of Kocher, Thorburn and Horsley on the surgical side of the controversy. Neurologists had varied views, some of which were decidedly hypothetic. However, most of them were inclined to the view that structural changes were probable, and that the degenerative and vascular changes, following injury to the cord, were indicated in the symptomatology of the disease. Facts were accumulating which made this view both tenable and reasonable. While many injuries to the cord showed no external evidences, the symptoms which followed indicated structural changes occurring within the substance of the cord, and irritation of the cord-roots by meningeal involvement. The symptoms in pronounced cases of hemorrhage were compared to the more obscure conditions called concussion, showing that hemorrhage was common in traumatism of the cord, and that similarity of sensory and vasomotor changes existed. The author said regarding the psychical element in cord-injuries that it was impossible to eliminate it. It was therefore important to recognize the definite and demonstrable symptoms, the symptoms which came on gradually, which in their entirety proclaimed the hemorrhagic origin of the disease. The neuropathology of to-day was leaning towards the organic origin of many diseases heretofore regarded as functional. Concussion of the cord was, in the judgment of the author, one of the most marked of these diseases, and he believed the research work of the future would establish this belief.

The X-ray in the Treatment of Malignant Growths.—Dr. Edwin Walker of Evansville, Ind., in his paper with this title, said that the X-ray had given favorable results thus far. Its exact status must be determined by clinical observation. He reported a case of alveolar melanotic sarcoma of the face, which was removed. The growth returned in two weeks and had extended to the neck. A secondary operation was performed a month later. There was rapid extension from that time, so that within a few days almost the entire neck was involved. The wound had not healed. There was immediate improvement after the use of the X-ray. The wound had cicatrized in two weeks, and all indurations had disappeared at the end of three months. The patient at this time seemed entirely cured. He spoke of the extent of the effects of the X-ray on pyogenic germs. A test was made both in test-tubes and Petri plates, the exposure to the ray being from 10 to 30 minutes. The results were negative. While the X-ray was of undoubted value in malignant growths, it should not be adopted to the exclusion of other known methods. Excision should be done, if possible, before the X-ray treatment was begun.

The Physiological Action and Therapeutic Uses of the X-ray.—Dr. C. M. Mutz of Douglass, Kan., followed with a paper on this subject, in which he dissented from the opinions of those who believed that the physiological and therapeutic uses of the X-ray may be intelligently studied without reference to its nature or genesis. It was not a "giant in chains," which physicians needed to approach in fear when they would unchain it, but no physician, in his opinion, should be content to use a therapeutic agent without inquiry as to its exact nature and the elements of its entity.

Relation of the So-called X-ray Burn to the Treatment of Malignant Growths.—Dr. J. Rudis-Jicinsky of Cedar Rapids, Iowa, contributed a paper in which he said that the action of the X-rays on the tissues was of marked electrochemical character. Irritation followed, and a regeneration of tissues was the result. Three factors determined the special effect on the cell: (1) Condition of the body, *i.e.* the amount of resistance the rays encounter; (2) the amount and intensity of the rays; (3) the character of the rays. When the irritation was moderate, the cells might be stimulated; but if prolonged or given in excess the change might be progressive in the tissues, leading to the so-called burn, regeneration, absorption, reabsorption, or to a total destruction of the cell. The author emphasized the protection of healthy tissues in radiotherapy, and other precautions in each case. He spoke of the selective power of the rays attacking diseased tissues first. He reported cases, with failures and apparent cures. He discussed the technic and selection of vacuum-tubes according to their burning-time; soft tubes or soft medium tubes for superficial growths, and high vacuum tubes for internal growths.

The X-ray Treatment of Cancer, with Report of Cases Cured.—Dr. Everett J. Brown of Decatur, Ill., discussed the subject under the following heads: 1. Technic; comparison of apparatus used; protection of the patient; protection of the operator; the distance of the tube; the time of exposure; the frequency of exposure, and the selection and management of tubes. 2. Description of X-ray dermatitis as compared with ordinary burns. 3. The remarkable influence of the X-ray on all low-grade tissue was superficial in location. 4. The uncertainty of results in treatment of deep-seated malignant growths. 5. Advantages of the X-ray treatment over surgery in many cases; (a) painless; (b) non-use of anesthetics; (c) less destruction of tissue; (d) astonishing results in many cases regarded as incurable surgically. 6. Report of cases cured.

Renal Calculi or Hepatic Calculi; Differential Diagnosis.—Dr. Charles E. Barnett of Fort Wayne, Ind., in a paper discussing this topic, declared that the X-ray in differential diagnosis was not as valuable here as in other regions. The author contended that it was impossible to make a differential diagnosis, and suggested cutting down and exposing the kidney, then being governed by the findings.

Cyst of Mesentery.—Dr. Herman E. Pearse, of Kansas City, Mo., reported a case of cyst of the mesentery that recovered after operation. He stated that cysts of the mesentery were exceedingly rare.

Through-and-Through Intestinal Suture.—Dr. F. Gregory Connell of Leadville, Colo., in a paper on this subject said that a through-and-through suture should be employed in preference to one that attempted to perforate but a portion of the entire intestinal wall, because (1) of less danger of yielding; (2) less danger of leakage; (3) smaller diaphragm; (4) adhesions were diminished; (5) there was less danger of necrosis; (6) there was no foreign body, and (7) there was a decrease in time. The most appropriate place for the knot of perforating stitches was in the lumen, and as many intentional non-perforating stitches were in reality unintentional perforating stitches, owing to the relative sizes of the needle and the submucosa, it might be stated that the ideal location for the knot in practically all intestinal sutures was outside of the peritoneal cavity in the lumen of the gut. The diaphragm, by its valve-like action, prevented leakage. The square or double stitch was superior to the circular stitch with its top knot. It was of practical import to have the last stitch, as well as the others, through all of the coats and knotted in the lumen. As the perforating stitch had been substituted for the Lembert by many, it might be said that if 12 Lemberts were bad and 10 perforating and two Lemberts were better, then 12 perforating were best. The author closed his paper with a description of the technic and a report of 54 cases.

Gastrojejunostomy with the McGraw Elastic Ligature for the Relief of Gastroptosis.—Dr. H. O. Walker of Detroit, Mich., began a paper with this title by saying that little had been done surgically for the relief of this condition. He reported three cases operated on successfully, and closed by saying that of all methods that had been suggested for the performance of lateral intestinal anastomosis, none, to his mind, possessed the advantages of the McGraw elastic ligature. Its special points are: (1) Its simplicity, which is far greater than that of any other method yet presented; (2) the ease and rapidity with which it could be done; (3) less liability to sepsis than by any other method; (4) no danger of a foreign body; (5) a larger opening could be made by it without liability to cicatricial contraction. Dr. Walker exhibited beautiful charts showing the steps of the operation.

Section Following Vaginal Puncture.—Dr. John Young Brown of St. Louis, Mo., spoke of the value of vaginal section in selected cases of pus in the pelvis. He called attention to vaginal section in contradistinction to so-called vaginal puncture. He alluded to the postoperative complications following vaginal section, as shown by a series of cases in which abdominal section was subsequently done.

Cancer of the Uterus in the Mississippi Valley.—Dr. Emory Lanphear of St. Louis said that Eastern surgeons did not operate on cancer of the uterus, while Western surgeons did. What was the result? The census statistics of 1900 showed cancer of the breast, on which all operated, East and West; cancer of the stomach, on which no one operated, and cancer of the uterus, as follows: East, cancer of the breast, 613 cases; cancer of the stomach, 1,785 cases; cancer of

the uterus, 1,101 cases. Mississippi Valley, cancer of the breast, 874 cases; cancer of the stomach, 3,776 cases, and cancer of the uterus, 679 cases. The difference showed larger proportions of carcinoma uteri operated upon in the West, with either a cure or return of the disease in other organs; hence death was not included in the deaths from cancer of the uterus. Reports from 74 operators in the Mississippi Valley showed 274 cases which had lived more than five years. The diagnosis was confirmed by the microscope in most cases, a result encouraging for earlier diagnosis and prompter hysterectomy.

Abandonment of the Abdominal Belt After Celiotomy.—Dr. Maurice Kahn of Leadville, Col., declared his belief that if in consequence of his plea sufficient interest was aroused in the subject, it would be but a short time before the postoperative abdominal belt would be obsolete. He called attention to the direction of the muscular fibers, which intersected each other at angles varying from about 25 to 90 degrees. By reason of a common nerve-supply, the abdominal muscles acted synchronously. The excellent cancellated arrangement of the abdominal-muscle fibers made the gridiron operation the one of choice, for then the contraction of the muscles tended in itself to safeguard against hernia. He believed the straight-through technic to be the most effective factor in subverting an ideal result in most cases, not so much because the muscles were cut transversely as because of inaccurate suturing. The application of an abdominal belt, which, if tight enough to exert any influence, must relieve the muscles of their usual labor, resulted in fhe atrophy of non-use, whereas it would be desirable to have the hypertrophy of over-use. If it were possible to apply a belt internal to the abdominal wall, it might perhaps be of service in giving the cut edges an opportunity to firmly unite before any strain was imposed upon them. Such arguments could not be advanced in favor of the external abdominal belt, which would not prevent the exertion of pressure on structures internal to itself. It had been his practice for over three years, after removing the first dressing, which was applied snugly for comfort and removed at the end of a fortnight, to allow patients to go without any support.

Fibromyomatous Tumors of the Uterus.—Dr. L. G. Bowers of Richmond, Ind., called special attention to the importance of the early diagnosis of fibroids, thus leading to conservative methods of treatment. He enumerated some of the symptoms of fibroids that were many times attributed to other trivial causes by a superficial examination, and insisted that the patient be examined under an anesthetic and curetted at the same time if necessary. He pointed out that most of the literature dealt exclusively with the operative views, and that nothing was said about preventive measures. The early practice of such treatment often obviated the necessity for hysterectomy later on.

Treatment of Fractures of the Patella.—Dr. David C. Peyton of Jeffersonville, Ind., discussed the relative frequency of these fractures; the contractions of the quadriceps as an efficient agent in the etiology; the displacement of the fragments and the associated injuries to the soft parts; the diagnosis, and then outlined the advantages of treatment by open arthrotomy as compared with non-operative procedures.

Dr. Truman W. Brophy of Chicago gave a lantern demonstration of his method of operating on cases of cleft palate. He also exhibited patients upon whom he had operated, showing excellent results. The patients were able to articulate remarkably well.

Dr. C. E. Ruth of Keokuk, Iowa, discussed the subject of antistreptococcic serum in septic conditions.

A resolution was adopted, making the Mississippi Valley Medical Association a district branch of the American Medical Association. The constitution and by-laws of the former will be revised to conform to this change.

The following officers were elected: President, Dr. Edwin Walker, Evansville, Ind.; Vice-Presidents, Dr. Hugh T. Patrick, Chicago, Ill., and Dr. Wm. Britt Burns, Memphis, Tenn.; Secretary, Dr. Henry E. Tuley, Louisville, Ky.; Treasurer, Dr. Thomas Hunt Stucky, Louisville, Ky.

Memphis, Tenn., was selected as the place for holding the next meeting, in 1903.

MEDICAL ASSOCIATION OF THE GREATER CITY OF NEW YORK.

Stated Meeting, held at the New York Academy of Medicine, October 13, 1902.

The President, Andrew H. Smith, M.D., in the Chair.

A Symptom Indicating the Probable Development of Mastoiditis, and the Necessity for Early Operation.—The first paper of the evening was read by Dr. H. H. Alderton. He gave the details of a case recently met with in which acute inflammation of the middle ear on both sides followed an attack of tonsillitis. The presence of gas within the tympanum was found at the time of the primary incision of the drum membrane, and later, mastoid inflammation called for an operation on both sides. The greatest interest in the case lay in the fact of the existence of gas under pressure within the tympanic cavity, and the bearing this had upon the development of mastoiditis. Three days was time and more than enough to mark the advance from the comparatively slight destruction in the left mastoid to the purulent disintegration existing in the right mastoid cells. This was the second case of the kind that had come under his observation. As both were in private practice, and in neither case was the condition looked for, a bacterial examination at the time of the incision of the tympanic membrane was not feasible. The gas was evidently the product of bacterial development, but whether from an otherwise innocuous organism or from one of extraordinary virulence it was impossible to say. In the latter case the early and extensive involvement of the mastoid was easily explained, but if the gas was the product of an inoffensive bacterium existing in a mixed infection, it probably acted mechanically in disseminating the infection. The Eustachian tube being closed, the only escape the gas had was into the mastoid antrum and cells. His conclusion was that the presence of the gas was a symptom which indicates the probable development of mastoid empyema and the necessity for early operation on the mastoid process.

Nature of the Bacterial Infection.—Dr. Gorham Bacon said the occurrence of gas was infrequent. He did not think it indicated that mastoiditis would necessarily follow. The nature of the bacterial infection present was of great importance in determining the question of operation, and when the streptococcus was the cause of the trouble, it would almost certainly be necessary to operate. He referred to a case of double mastoiditis in which there was streptococcus infection on one side and staphylococcus infection on the other. On the side where the streptococcus was found there followed involvement of the sigmoid sinus, but on the other side no further involvement occurred.

Dr. E. B. Dench had had several cases where gas was found in acute inflammation of the middle ear, and in which he suspected the development of mastoiditis. The latter, however, did not actually occur. He emphasized the importance of an early incision of the

drum membrane and the floor of the upper part of the tympanum, and said that the earlier the operation was done the better it was for the patient's hearing.

Dr. Fred Whiting had met with four cases of the kind described in the paper. In three the infection was due to the pneumococcus, and in the fourth to the streptococcus. The latter was the only one in which he found it necessary to open the mastoid cells, and he agreed with Dr. Bacon that streptococcus infection was almost certain to necessitate an operation. He said he would not be inclined to attribute as much significance to the gas symptom alone as Dr. Alderton had done.

Infection with the Bacillus of Dysentery, with Especial Reference to Its Rôle in the Summer Diarrheas of Children.—Dr. Simon Flexner, Professor of Pathology in the University of Pennsylvania, made an address on this subject. It would seem to be the tendency in modern medicine, he said, to characterize a disease by its etiology. Thus, grouped under the name of diphtheria are now many pathological conditions which formerly were not regarded as belonging to this affection; yet all were characterized by the presence of its distinctive micro-organism. This differentiation has been of great benefit to the subject of diphtheria, and so it seems likely to be the case as regards the group of symptoms constituting dysentery. The study of the causation of the latter disease has tended more and more to bring us to the conclusion that there is a specific organism constituting the etiological factor in the great majority of intestinal infections which go by the name of dysentery, and in 1898 Shiga's discovery was made known. As to the grounds upon which this organism is assumed to be the cause of this wide group of infections, it may be stated that the bacillus is never found in the intestine in a state of health, that it is present in various types of dysenteric disease, that animals may be inoculated with the disease with cultures from it, and that agglutinative reactions are obtained with it which can not be secured from any other organisms found in the intestinal canal. This bacillus was first isolated in the hospital at Tokio. Dysentery is a disease which is endemic in Japan. Frightful epidemics of it occur every year, in which thousands of persons are attacked, and the mortality is often as high as 50 per cent. Since 1898 the organism has been found in cases of dysentery in almost all parts of the world. We have been accustomed to think of specific types of the disease, as, for instance, amebic dysentery. The form which is characterized by the presence of amebæ dysentery. The form which is characterized by the presence of amebæ is well known as a chronic affection. It is much more common in tropical than in temperate climates, but never occurs as an epidemic. No false membranes are found, but there is much thickening of the gut. Many observers have been skeptical as to amebic dysentery as a distinct type, regarding the presence of the ameba as an epiphenonenon; but it is worthy of note that one or two cases of acute amebic dysentery have recently been reported from the Philippines. The *Bacillus dysenteriæ* has not been discovered in connection with it. The particular form of dysentery associated with the latter is an active disease, such as is met with in the great epidemics. Pseudomembranous colitis may be regarded as typical of it; yet the greatest variations are found, and false membranes are not infrequently absent. The affection tends to become chronic, and in this form of it there are proliferative changes in the intestinal mucosa, while exacerbations occur which are due to new developments of the organism. During the past season, under the auspices of the Rockefeller Institute of Medical Research, the opportunity was afforded to study the conditions met with in the summer diarrhea of children, and the work was carried on at the Thomas Wilson Sanitarium near Baltimore. At the beginning of the investigation the endeavor was made to obtain from the dejecta as many organisms as possible. All of these were tested with the blood serum of the sick children, and in no other instance than in the case of the Shiga bacillus was the agglutinative reaction observed. The cases were characterized by an acute onset, elevation of temperature, and the presence in the feces at some stage of mucus and blood. Of 51 or 52 cases of this character in almost none was there a failure to recognize the bacillus. There were other cases of a lighter grade, which might be designated as dyspeptic diarrhea, where the bacillus was not found. Some of these milder cases, however, afterwards became of a severe type, and then the organism was found to be present. The conclusions arrived at were that this bacillus is a stranger in the system, and that its etiological relation to the disease met with is shown by its presence, its constancy, and the peculiar blood-reaction obtained from it. As to the practical results of these discoveries, they seem likely to prove of great value, first as regards the prevention of the infection, and, secondly, as regards its successful treatment. As to the matter of prevention, the first consideration is to discover where the organism is found in nature. While at present we have no positive knowledge on this point, there is direct evidence to the fact that, like the germs of typhoid and cholera, it gains access to water. Like these organisms, it is easily destroyed, being killed by a temperature much below the boiling point. Proceeding on the general basis of vaccination, it is entirely feasible to protect small animals, like guinea pigs, against it. As it is almost impossible to get men always to drink boiled water in the tropics, it would perhaps seem justifiable that troops stationed in some parts of the Philippines, for instance, should be inoculated with the attenuated serum as a possible protection against dysentery. In the case of children inoculation would not be justifiable. What we would hope for for them would be the production of a serum which would prove successful as a means of treatment. In doubtful cases the blood can be tested for the agglutinative reaction, but in active cases it is best not to wait for the blood reaction, but to immediately examine the dejecta for the bacillus. If an effective serum can be produced it would seem justifiable to use it in suspected cases at the earliest possible moment. It is at present certain that with an immunizing serum it is perfectly easy to protect guinea pigs against a dose of infection which without such protection would inevitably prove fatal.

Local Experience.—Dr. Francis Delafield said that as regards the character and the treatment of the disease he feared he had not as yet got beyond local experience. There were a great many different conditions, and what was good for one was not good for another. Pretty regularly there was in New York an acute inflammation of the colon, attended with congestion and a free discharge of mucus, which might occur either in adults or in children. If the whole colon was involved the latter were apt to die, while the former generally recovered. Then, especially in hot weather, there was an acute inflammation (met with oftener in adults than in children) in which there was a very large transudation of serum. This, too, was likely to prove fatal to children. Its etiology did not appear to be settled. Again, there was a rarer form of inflammation, in which there was an infiltration of the connective tissue coat of the colon with pus, such as sometimes occurred in the stomach, and which behaved like the other streptococcus infections. So far as he knew it was always fatal. Still again, there was a colon inflammation with more or less necrosis. The glandular coat might be involved or

the connective tissue coat, or the whole wall. The acute cases lasted about three weeks and might terminate in death. The chronic cases lasted for months and might also eventually prove fatal. There was another form of necrotic colitis, the croupous, and this would appear to come under the category described by the speaker. It was a form of dysentery met with in both temperate and tropical climates. Its severity depended partly on the part affected and partly on the intensity of the infection. He was somewhat surprised to find that Dr. Flexner regarded amebic dysentery as essentially a chronic affection. It seemed to him that the acute cases were not so very rare. There were acute, subacute, and chronic cases, and on the whole he thought there was much of this form of dysentery.

The First Ray of Light on the Etiology.—Dr. L. Emmett Holt said that as the result of the researches described we had the first ray of light on the uncertain etiology of our summer diarrheas. In the past many things were suspected, but very little had been proved. The blood reaction now obtained established something more than mere conjecture, and the isolation of the bacillus of dysentery in the diarrhea of children was a great step forward. It seemed to him that we were on the eve of great progress, and that the highest praise was due to Dr. Flexner for what had already been accomplished.

Identification of the Bacillus.—Dr. E. K. Dunham said there was but little difficulty in identifying the bacillus. While in Maine during the past summer he had had the opportunity of doing this in four cases, two of which were in adults and two in children. In three of them the agglutinative reaction was obtained, while in the fourth cultures were made from the dejecta.

Infection from Contaminated Milk.—Dr. H. D. Chapin said that in listening to Dr. Flexner's remarks it occurred to him that if the infection was conveyed in water, it might also be in milk. He was also struck by Dr. Delafield's remarks on local experience. In the summer of 1901 the mortality from infant diarrhea was very great in New York City. This could not very well be attributed to the milk as it was shipped from the country, since the same milk was used in the rural districts, and that season the death-rate was low there. During that year the streets of the city were very much torn up, and it seemed probable that some local infection was imparted to the milk after its arrival here. As the conditions were extremely favorable for such contamination of the milk, he could not but believe that this was the source of a good deal of the trouble.

Dr. James Ewing said that in regard to amebic dysentery his experience coincided with that of Dr. Delafield. The acute diseases did occur here, and cases of it were found among the troops in camp at Montauk Point during the recent war.

Are all Types of Summer Diarrhea Due to the Bacillus of Dysentery?—The question naturally arose whether all types of summer diarrhea are due to the Shiga bacillus. In some cases recently reported at the Pathological Society the disease was apparently not due to the organism, as no blood reaction could be obtained. As to dysentery, it seemed to him that Dr. Delafield had taken the correct ground. Some varieties were caused by the streptococcus and others were due to different causes. As to a protective serum, up to the present time anti-typhoid serum had proved practically useless, notwithstanding the fact that in the laboratory animals had been rendered immune from infection. He therefore thought it doubtful if a serum could be prepared of sufficient power to control this formidable disease.

Summer Diarrhea of Many Types.—Dr. Henry Koplik said there could be no question that the term summer diarrhea includes many types. We met with a great variety of cases, ranging from the very mild to the severe choleraic. Dr. Flexner had pointed out that certain cases are due to a particular bacillus, and, as Dr. Holt had remarked, this was certainly a great step in advance.

Dr. Henry Illoway thought the cases in children in which the Shiga bacillus was found should be designated simply as dysentery. The so-called summer diarrheas, he said, were made up of a large number of groups. Personally he designated as summer diarrhea only that variety which is caused by heat. The heat was the sole factor in its production, and if the child was removed to a cool climate, the disease at once disappeared. If removal was impossible, the disease could be successfully combated by the use of cold (the cold pack, etc.), plus such treatment as was required for the correction of dyspeptic symptoms. In this class of cases the bacillus could not be the cause, for the reason that the disease develops so rapidly and disappears so rapidly when the child is removed to a cold place. The other diarrheas were those met with in winter as well as in summer. He thought it would simplify the matter if Dr. Flexner would say that we have cases of dysentery in infants and young children.

Serum Treatment.—Dr. C. A. Herter related the case of a child five years old seen during the past summer in association with Dr. Theodore Dunham, in the treatment of which serum prepared by Dr. Flexner was employed. The serum was used for the following reasons: (1) The patient was desperately ill; (2) Dr. Flexner had demonstrated the fact that in animals his serum protects against the bacillus; (3) the bacillus of dysentery had been shown to be present in children suffering from summer diarrhea; (4) the experience of Shiga in the treatment of dysentery was borne in mind. Out of 500 cases at the hospital in Tokio, 280 were treated with serum, the others being treated in the ordinary manner. Shiga reported that the mortality among those receiving the serum treatment was very much less than in the case of the others. It was only nine or 10 per cent., while in the others it amounted to from 30 to 50 per cent., 39 per cent. being the average. He also reported that under the serum treatment there was a prompt amelioration of the symptoms and the course of the disease was materially shortened. In view of these facts the serum treatment was resorted to in the case in question. The child had been ill for nearly a week, repeated vomiting had taken place, and enemata could not be retained. There was great prostration, and several periods of collapse had occurred, in which it was feared the patient would die. For three days no food had been retained. About the seventh or eighth day of the disease there was much distension of the abdomen. The movements, which were very numerous, consisted of mucus stained with blood. Within the last thirty-six hours the patient had clearly lost ground. Injections of 10 or 12 c.c. of the serum, three times a day, or oftener, were then commenced. An immediate improvement was observed after the first injection. The number of movements was diminished and the tenesmus relieved, the temperature and pulse were lowered, and the patient became distinctly more comfortable. Restlessness, which had been extreme, was relieved in a remarkable manner. The injections had such a good effect that on the third day it was decided advisable to discontinue them. In the course of some hours, however, there was a recurrence of the symptoms, and then injections were resumed. As soon as one large dose was given there was again a striking improvement; but after three or four injections it was decided to diminish the dose, as it seemed doubtful whether the serum was now

doing any good. The movements did not increase in number, nor did the blood reappear in the passages, but there was considerable abdominal distress and the temperature rose to 105° F. It seemed probable that secondary infections were present at this time. On the whole, Dr. Herter thought that this was a line of investigation which afforded great promise. He could not assent to the opinion that the fact that we had not succeeded with typhoid serum was any reason why we should not succeed here. Of course, much study and research, as well as extended observation, were still needed before this application of serum therapy could be placed on a thoroughly satisfactory basis.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, October 2, 1902.

The President, Dr. John M. Fisher, in the Chair.

Fibroma of the Ovary Associated with Ascites.—Dr. Theodore A. Erck, reported the case of a married woman twenty-four years of age who had been married five years and has one child four years of age. About a year or so ago the patient noticed that the menstrual periods were irregular as to the time of their appearance, and the flow scant. In May, 1901, an abdominal enlargement was noticed, and although the menstrual periods were regular, the amount of blood lost had become so small, that she imagined she was pregnant. Examination revealed the abdomen greatly distended with free fluid, though the walls were not tense. A hard nodular mass about the size of a cocoanut occupied the hypogastrium, which by combined examination was found to be freely moveable and not conected with the uterus. Laparotomy was performed. Several gallons of clear straw colored fluid were evacuated from the abdominal cavity, and both ovaries removed. The pathologist pronounced the growth which involved the right ovary as a fibroma; and the opposite ovary sclerotic and cystic. The patient made an uninterrupted recovery. It seemed more likely that the ascites was due to something intrinsic in ovarian growths, perhaps a secretion. Some of the literature of the subject was detailed.

Dr. Richard A. Cleeman said that the specimens which he exhibited loaned from the Mütter Museum were not different in appearance from that shown by Dr. Erck. They were smaller than when removed on account of the contraction caused by the preserving fluid. One represents a tumor of the left ovary and the other, of the right. They were taken after death from a patient, a single woman, a school teacher sixty-five years of age. When about sixty years of age in robust health, she noticed a progressive enlargement of the abdomen, unaccompanied by pain or other symptoms. An examination made some months subsequently revealed several apparently distinct tumors floating above the brim of the pelvis in ascitic fluid. There seemed more than two, owing doubtless to their irregular surface. Vaginal examination showed the whole roof of the pelvis irregular to the touch and of strong hardness. The late Dr. Girvin saw the case in consultation, and agreed from the condition of the pelvic tissues above described and the accompanying ascites that the growths were probably malignant; therefore, no operation was advised. About a year after the above examination she was tapped for the first time, when about 63 pints of fluid were taken away. In the next three years before she succumbed from exhaustion she was tapped about thirty times, altogether 1,483 pints of fluid being removed. The pedicles were found at the autopsy to be very long and at their base or in the situation of the broad ligaments sessile masses were felt, which appeared to be of the same nature as the diseased ovaries; these were not removed. Microscopical examination of the tumor shows it to be a pure fibroma with no suggestion of cancer.

Dr. E. E. Montgomery said he had been greatly interested in the paper of Dr. Erck and the exhibition of specimens made by Dr. Cleeman. His own experience had been similar to that of the writer of the paper and others whom he quotes as to the frequency of ascites in such growths. It is a matter of considerable importance to determine why ascites should be associated with one such growth, and absent from another. It had occurred to him that it may be explained in two ways: first, the pressure of the growth, a solid tumor may be such as to interfere with the venous circulation, while the arterial is unimpaired and in this way serous exudation is a natural result, just as it occurs in a moderate portion of the pedicle of a cyst. The more probable explanation is, that it is due to degenerative processes in the growth itself. In the description of the pathology of this growth, the writer mentions that the vessels were very small, fine and infrequent, showing that the complete nutrition of the growth was probably impaired and the degenerative processes resulting are made evident in the irritation of the peritoneum. It is known how quickly the peritoneum affords serous effusion in cysts whose circulation is impaired by torsion of the pedicle. An ascites is very marked where this torsion has led to the necrosis of the growth. This same explanation is applicable to malignant growths. As the growth increases in size from proliferation of the cells vessels are compressed, the circulation is impaired and serous exudation of the peritoneal cavity results. The case described by Dr. Cleeman illustrates the wisdom of employing buttonhole incision for the relief of large accumulations when associated with abdominal growths in preference to paracentesis. An incision sufficiently large to permit introduction of the finger is not attended with any greater danger than the use of the trocar, and does throw additional light upon the disorder present and enables the operator to determine the possibility of a radical operation.

Dr. F. Hurst Maier said it is still a mooted question why hydro peritoneum exists in many cases of fibromas of the ovary. As Dr. Erck said, not much light has been thrown upon it. It is hard to explain why fibromas of the ovary, equal in size to those of the uterus, analogous in position, and with other conditions absolutely identical, should in the one case give rise to hydroperitoneum, while in the other it does not. He assisted Professor Montgomery in an operation this summer, in which there was an excedingly large fibroma of the ovary. Approximately, its diameters were 12 by 9 or 10 inches. In outline it was irregularly nodulated. One part was infiltrated with blood as if there had been a partial interference with the circulation. A definite twist of the entire pedicle was not present. In this case, the fibroma was of a character in which ascites might be expected, yet there was none. The growth was pedunculated, and in connection there was a smaller fibroma of the uterus.

Dr. John M. Fisher said that the interesting point in connection with the discussion is the fact of Dr. Cleeman's case having fibroma of both ovaries. He did not recall having read of a case of fibroma in both ovaries. Dr. Kelly, in his Operative Gynecology, says that fibromas of the ovaries cause ascites because of their extraordinary mobility, giving rise to irritation of the peritoneum. Since in Dr. Montgomery's case the tumor had a very broad base, probably it was not as movable as these growths usually are. Another question was there a microscopical examination made of the specimen? He judged from its extraordinary size it may have been a fibro-sarcoma. Ascites may occur in connection with

pedunculated fibromas of the uterus but rarely when the tumors are sessile.

Hydrops Tubæ Profluens.—Dr. F. Hurst Maier reported two cases of hydrops tubæ profluens, illustrative of the changes found in that condition. The first, a nullipara, had been treated 10 years for a mucopurulent discharge. There was bilateral pelvic pain, aggravated during menstruation, and about two weeks preceding the menstrual period there occurred "gushes" of a tea-colored fluid. Examination disclosed a tense elastic cyst. A diagnosis of hydrops tubæ profluens was made, and subsequently confirmed upon operation. The second patient presented similar features, the tumor disappearing in this case after the periodical "gushes." In discussing the pathology, the writer calls attention to the cause of obstruction in hydrops tubæ profluens, as compared to occlusion and obliterations from inflammatory processes, explaining the mechanism of each. The differential diagnosis, the present status of the condition among gynecologists, and the literature on the subject, are fully considered.

Dr. A. J. Downes said that in December, 1900, he read a paper before this Society entitled Left Lumbar Nephro-Fixation and Abdominal Myomectomy in One Sitting, with Report of Case. In this case the symptoms of hydrops tubæ profluens were present. The clinical symptoms as classically described by Dr. Maier in his paper were all present. The cause in my case was a small fibroid at the right uterine cornua intermittently closing the uterine end of the tube. The illustration accompanying my paper distinctly showed the condition. The specific diagnosis of the tubal condition was not made before operation, but the condition and its cause plainly described after it. He said that the technical name, hydrops tubæ profluens, was at that time not familiar to him, or he would have used it and his case would not have escaped the careful search of Dr. Maier.

Dr. E. E. Montgomery said that the case cited in the paper by Dr. Maier recalls to his mind a patient in whom he saw a considerable sized sac to one side of the uterus, and later when he operated upon the patient without re-examination, he was much discomforted to find the sac had largely disappeared. Investigation, however, showed a rather relaxed or distended tube on the corresponding side. The interrogation of the patient subsequently revealed that there had been a profuse discharge from the vagina, which had undoubtedly been the channel through which the tumor had disappeared. It illustrates how readily one physician might examine a patient and advise operation, when later, after a discharge of this kind, examination by another physician would fail to discover any growth, when the second physician, if he did not keep in mind the possibility of these growths filling and emptying, might assert that the previous examiner was either ignorant or a knave.

Dr. Maier in closing said he did not think that profluent hydrosalpinx is quite so rare a condition as one would infer from the small number of cases found in the literature. Many cases are undoubtedly overlooked by the failure of the physician to make repeated examinations. In one of his cases, he was sure he would have failed to notice this feature if the patient had consented to early operation. As it was, he had the opportunity to observe the alternate appearance and disappearance of the tumor throughout the better part of a year. In reply to Dr. Cleeman's question, it has been found that the tubes at times fail to refill; and changes in the structure follow, which bring about a clinical cure. An illustration of this is found in the case quoted by Dr. Montgomery.

Temperature in the Diagnosis of Extra-uterine Pregnancy During the Period of Collapse from Hemorrhage.—Dr. Charles P. Noble said the following case is of special interest because of a doubtful diagnosis, and is reported to elicit discussion upon the point as to the value to be attached to a rise of temperature in a patient in collapse in deciding for or against a diagnosis of extra-uterine pregnancy with rupture. After reaction from collapse or faintness due to hemorrhage from ectopic pregnancy a rise of temperature is quite common, and is due to plastic peritonitis, which is a part of the process of walling off the blood clots from the general peritoneal cavity. With a history suggestive of ectopic pregnancy and a mass in Douglas' pouch, the presence or absence of a rise in temperature would not at all throw doubt upon a diagnosis of ectopic pregnancy with rupture. On the other hand, in all cases coming under observation, in which the patient was seen during primary collapse from hemorrhage, there was a subnormal temperature. This fact caused a question as to the diagnosis of the following case:

Mrs. R., aged thirty-four years, has had two children and one miscarriage. She menstruated regularly and normally March 21, 1902. She missed the April period. A pelvic examination made about the middle of May by Dr. William E. Parke led him to think that uterine pregnancy existed. At that time there were no lateral masses felt. May 25, about noon, after active exertion, the patient was seized with severe epigastric pain, faintness and vomiting. The pain and faintness continued throughout the day. A neighboring physician who was called in made a diagnosis of acute indigestion, and prescribed an anodyne. Dr. Parke saw her at 11.30 P.M. She was then pale with a pulse of 120, the skin cool, the mind clear and the abdomen distended, with tense abdominal walls. The vaginal examination was unsatisfactory, but no lateral masses were made out. Dr. Noble saw the patient in consultation about 1 A. M., when the condition was as described. The pelvic examination disclosed nothing abnormal, but was unsatisfactory because the patient was stout and the abdomen so distended that bimanual palpation was impracticable. The absence of menstruation, the appearance of the patient, the condition of the pulse and the persistence of faintness, were suggestive of hemorrhage from extra-uterine pregnancy. On the other hand, no clots or fulness could be felt in Douglas' pouch, the pain had been epigastric in location, and the vaginal temperature was 100° F. Hypodermic stimulation and hypodermoclysis were advised to promote reaction, and it was felt that if reaction were not prompt, a diagnosis of hemorrhage would be rendered more certain. The patient was left with the understanding that if reaction was not prompt and satisfactory, she was to be transferred to the Kensington Hospital for Women for operation. This was done the following morning, when the abdomen was promptly opened and found full of fluid and clotted blood due to ectopic pregnancy. The patient was so prostrated for some days that the outcome was in doubt, but she made a good recovery. The case is reported as showing that a rise of temperature a few hours after the onset of symptoms of hemorrhage from ectopic pregnancy does not exclude a diagnosis of collapse from hemorrhage.

Bilateral Tuberculous Salpingitis.—Dr. E. E. Montgomery said that the case recounted by Dr. Noble lead him to feel that one which recently came under his own observation presents sufficient interest from a diagnostic standpoint to be worthy of consideration. She was a young woman, twenty years of age, employed in a department store, where she received the munificent salary of four dollars a week, upon which to support her mother and several sisters. She had not menstruated for two years. She had recently been taken with

a severe attack, attended with considerable pain, and was sent to the Pennsylvania Hospital, where operation was advised. To this, however, she would not consent, and returned to her home, when he was asked to see her. He found a mass upon the left side, extending nearly to the umbilicus, which was very sharply defined. A second mass could be felt on the right side in front, but lower down in the pelvis. An attempt was made to explore the vagina, but its orifice was found guarded by an unruptured hymen. The age of the patient, the manner of life, the absence of menstruation for two years, and her general appearance, made him believe that he had to deal with a case of tuberculous disease of the tubes, and he advised immediate operation. She was sent to St. Joseph's Hospital. As soon as the abdomen was opened, there was evident free blood in the peritoneal cavity. He turned out the mass on the left side, which was the size of a large sweet potato, five inches in length, two inches in diameter, involved the tube and ovary, and was imbedded in a mass of clotted blood. His first view of this almost made him feel that there had been a rupture of an ectopic gestation. Upon examination, however, he found the pedicle was twisted, immediately in contact with the uterus, thus cutting off the blood supply, which had undoubtedly at first been gradual, so that the tumor had been filled with blood which could not return to the veins. The other tube was equal in size but was free from blood, excepting one small clot on its inner margin. Both tubes were subsequently found to contain pus, that on the left was mixed with blood. The right was clear pus. Examination failed to reveal the presence of tubercle bacillus. He is inclined from her history, however, to attribute the cause to tuberculosis. The twisting of the pedicle was undoubtedly the cause of the hemorrhage. He had seen cases similar to the one recounted by Dr. Noble, in which there is an elevation of the temperature during the primary collapse immediately following hemorrhage. It occurred to him if Dr. Noble believed this case to be one of hemorrhage and collapse from it, that a hypodermoclysis and stimulation of the heart by hypodermic injections of strychnine would not be proper treatment. He would feel it was wise to elevate the part from which the hemorrhage was occurring, and apply cold, and not endeaver to increase the heart action, so that clotting might be encouraged to take place in the bleeding vessel.

Dr. Maier said he had seen Dr. Montgomery's specimens, and the one with the twisted pedicle was certainly the oddest pyosalpinx that he had ever seen. The blood had infiltrated the walls of the tube, the mesosalpinx, and the ovary, enlarging them to three times their natural size. In color they were as black as coal.

Dr. J. M. Fisher said the point that Dr. Noble pointed out in connection with the want of any mass in the pelvis recalls to his mind a young negress brought to the Philadelphia Hospital, giving the characteristic history of a ruptured tubal pregnancy 10 or 12 days previously. There was no doubt but that she had had a tubal pregnancy, and that tubal abortion or rupture had taken place, but nothing could be felt in the pelvis indicating the presence of blood-clot and the uterus was freely movable. The abdomen was opened, and it was found that while there was no blood en masse every portion of the visceral peritoneum was more or less covered by a black tarry material, representing the residue of corpuscular blood elements due to the distribution of the blood by the capillary planes of the intestines.

Reception to Drs. Keen and Wood.—Dr. W. W. Keen and H. C. Wood of Philadelphia were tendered a complimentary dinner last Thursday commemorative of their return from their travels.

BOOK REVIEWS.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VII. MATERIA MEDICA AND THERAPEUTICS; Preventive Medicine; Climatology; Forensic Medicine. Edited by GEORGE F. BUTLER, Ph.G., M.D., HENRY B. FAVILL, A.B., M.D., NORMAN BRIDGE, A.M., M.D., HAROLD N. MOYER, M.D., June, 1902. The Year Book Publishers, Chicago.

THE present volume of this series is quite up to the usual satisfactory standard of these manuals. Of this issue 145 pages are devoted to therapeutics and contain some very practical material gathered from many quarters. In fact, there are so many suggestions for treatment that it must be a little difficult for the practitioner to select just what he shall decide upon, and the consequence is apt to be some embarrassment. The chapter on climatology is devoted mainly to the consideration of the relation of climate to tuberculosis, but here once more there is a lack of digestion of the material, with many conflicting claims, so that the practitioner must find it hard to conclude just where to send his patients. The notes on forensic medicine are abstracts of rather specialized papers of interest mainly to coroners' physicians and medicolegal experts.

THE OPERATIONS OF SURGERY. Intended Especially for the Use of those Recently Appointed on a Hospital Staff and for Those Preparing for the Higher Examinations. By W. H. A. JACOBSON, M. Ch. Oxon., F.R.C.S., Surgeon Guy's Hospital, and F. J. STEWARD, M.S., London, F.R.C.S., Assistant Surgeon Guy's Hospital and the Hospital for Sick Children, Great Ormond St. Surgeon in charge of the Throat Department, Guy's Hospital. Fourth Edition. Vols. I and II. P. Blakiston's Son & Co., Philadelphia.

THE author tells us that this book, of which the first edition appeared nearly 15 years ago, was the outcome of the belief that a work in operative surgery which aimed at being more comprehensive in scope and fuller in detail than those already published would be of service to many who had recently received hospital appointments and to those who were working for the higher examinations. That he was correct in his view and successful in his attempt to fulfill these requirements is attested by the popularity the work speedily attained with the postgraduate students of his own country; and even a glance through the pages of the present edition shows that it still maintains its advanced position relative to other works on the same subject.

It illustrates most admirably one of the characteristics usually prominent in the productions of the Old World, and unfortunately found but faintly present in the average American medical work. This is the personal note which brings to the reader instant realization of the force and mentality of the writer, and while possibly a colorless statement of fact and syllogism may be more in accord with the dictates of pure science, still the graphic style, the wealth of apposite reminiscence, and the trenchant vividness of expression of such a book as the present add greatly to the reader's enjoyment and compel admiration for the vigorous personality whose presence is felt behind the written pages.

The general scope of the work is to some extent indicated by the title. Its object is to present the operations of surgery in a manner so complete as to leave

no essential detail to the ingenuity of the tyro, and in cases where judgment as to the choice or extent of operation is required, to supply the beginner with the counsel and knowledge which his inexperience lacks. Every page bears the imprint of the ripe wisdom matured during many years of practical work, and rounded out by diligent study of the views and results of others. Few works published, so adequately present the literature of the subject, and while no important articles are overlooked, it is gratifying to the American reader to find that references to the work done in this country are unusually abundant and, in fact, quite overshadow the citations from continental authors. The section on appendicitis, perhaps, illustrates this better than any other, and represents what is practically the teaching of the American authorities of to-day. Very different from the older expectant therapy of the British surgeons is this dictum: "I consider that any physician is justified in asking a surgeon who is skilled in abdominal surgery and who has the necessary aids, etc., to remove the appendix as soon as the diagnosis is made." Again, "I hold very strongly that every physician is not only justified in asking, but bound to ask, a surgeon skilled in this branch of surgery to interfere at the earliest possible moment in certain cases; viz., where the evidence of appendicitis is from the first severe and progressive." Of the diagnostic points greatest importance is attached to marked pain, tenderness and vomiting. The temperature and pulse are next in value, but the possibility of a falling temperature and impending perforation is pointed out. No mention, however, is made under this heading of the significance of leucocytosis.

The section on intestinal anastomosis is another one of great interest and completeness. All of the modern appliances used in facilitating this work are figured and described. The use of the Murphy button is highly commended as being expeditious and not requiring unusual skill, while the objections that have been urged against it are shown not to have great weight if care be exercised in adjusting a button of *proper size* in a well-nourished intestine. However, of Mayo Robson's decalcified bone-bobbin the author says: "This method appears to me likely, for the present at all events, to replace all the other special apparatus which have been invented to aid in the resection or anastomosis of the stomach and intestines."

All the newer operations are mentioned, such as the modern brain surgery, operations on the lung, suture of the heart, spinal cocainization, oophorectomy for cancer of the breast, and sympathectomy for exophthalmic goiter, of which both the latter are deprecated as not having fulfilled the expectations of their originators.

Sections that are especially full of practical points for the beginner are those on the ligation of vessels, which are illustrated and described with unusual thoroughness.

To advert now to some omissions which the general completeness of the work makes all the more inexplicable, it seems strange that in a book intended especially for beginners, while much space is given to hysterectomy, salpingectomy and ovariotomy, and simple and efficient method of perineorrhaphy is described, no mention is made of either trachelorrhaphy, Alexander's operation, ventral suspension or curettage. Again, under varicose veins but a single operation is given, that of excision, which, though admittedly the best, is not always feasible. Ingrowing toe-nail is so common an affection that the young surgeon might be grateful for the results of the author's experience with such cases, but the subject is not touched upon.

The illustrations are well above the average in an English work, but are not as numerous as the subject requires, and in point of execution leave much to be desired. The index also is not complete enough to satisfy the demands of a book of reference.

With these few exceptions the work deserves in the highest degree the admiration of the reader, and the rational and logical discussion of all the contingencies likely to arise, the decisions to be made in operative work, together with the completeness of presentation of the subject, render it a work that would be useful to any surgeon young or old.

BOOKS RECEIVED.

The MEDICAL NEWS *acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the* MEDICAL NEWS *will shortly appear.*

THE PURIN BODIES OF FOODSTUFFS. By Dr. I. Walker Hall. 8vo, 108 pages. Sherratt & Hughes, Manchester.

UEBER DAS PATHOLOGISCHE BEI NIETZSCHE. Von Dr. P. J. Möbius. 8vo, 106 pages. J. F. Bergmann, Wiesbaden.

NOSE AND THROAT IN MEDICAL HISTORY. By Jonathan Wright, M.D. 8vo, 244 pages. The Laryngoscope, St. Louis.

THE MATTISON METHOD IN MORPHINISM. By Dr. J. B. Mattison. E. B. Treat & Co., demi 8vo, 40 pages. New York.

CLINICAL METHODS. By Drs. R. Hutchison and H. Rainy. 12mo, 612 pages. Illustrated. W. T. Keener & Co., Chicago.

DISEASES OF INFANCY AND CHILDHOOD. By Henry Koplik, M.D. 8vo, 675 pages. Lea Brothers & Co., Philadelphia and New York.

THE DISEASES OF INFANCY AND CHILDHOOD. By Dr. L. Emmett Holt. Second Edition. 8vo, 1161 pages. Illustrated. D. Appleton & Co., New York.

PRACTICAL OBSTETRICS. By Edward Reynolds, M.D., and Franklin S. Newell, M.D. 8vo, 552 pages. Lea Brothers & Co., Philadelphia and New York.

THE TREATMENT OF TABETIC ATAXIA. By Dr. H. S. Fraenkel. Translated by L. Freyberger. 8vo, 185 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia.

A TEXT-BOOK OF ANATOMY BY AMERICAN AUTHORS. Edited by Dr. F. H. Gerrish. 8vo, 944 pages. Illustrated. Lea Brothers & Co., New York and Philadelphia.

A GUIDE TO THE PRACTICAL EXAMINATION OF THE URINE. By Dr. James Tyson, 10th Edition, demi 8vo, 297 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia.

PROGRESSIVE MEDICINE, SEPTEMBER, 1902. Edited by Hobart Amory Hare, M.D., and H. R. M. Landis, M.D. 8vo, 431 pages. Lea Brothers & Co., Philadelphia and New York.

A MANUAL OF SURGERY FOR STUDENTS AND PRACTITIONERS. By Dr. W. Rose and A. Carless. Fifth Edition. 8vo, 1213 pages. Illustrated. William Wood & Co., New York.

MATERIA MEDICA, THERAPEUTICS, MEDICAL PHARMACY, PRESCRIPTION-WRITING, ETC. By William Schleif, Ph.G., M.D. 12mo, 389 pages. Lea Brothers & Co., Philadelphia and New York.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS. Vol. X. Skin and Venereal Diseases, Nervous and Mental Diseases. Edited by W. L. Baum, M.D., and Hugh T. Patrick, M.D. 12mo, 245 pages. The Year-Book Publishers, Chicago.